MCESA
Maricopa County Education Service Agency

MCESA REILize Decision Support System
Business Requirements Specification (BRD)

Data Management / Administration And Reporting (DMAR)

Prepared By: Bilal Chaudhry, Joe Frost, Tara Sprouse, Barry Harris

Create Date: 16-Feb-2012
Last Modified Date: 24-Apr-2012

Arizona Department of Education
1535 W. Jefferson Street
Phoenix, Arizona 85007-3209

Arizona Department of Education

Version No: 1.0

TABLE OF CONTENTS

1 DOCUMENT INFORMATION 4

1.1 VERSION HISTORY 4
1.2 REFERENCES 4
1.3 STAKEHOLDERS 5
1.4 DOCUMENT APPROVALS 5

2 INTRODUCTION 6

3 PURPOSE AND SCOPE 6

3.1 PURPOSE 6
3.2 SCOPE OF WORK 7

4 DESCRIPTION OF THE PROJECT 7

4.1 DESCRIPTION 7
4.2 RATIONALE 8
4.3 ENVIRONMENT 8
4.4 USER CHARACTERISTICS 8
4.5 GENERAL CONSTRAINTS 10
4.6 ASSUMPTIONS AND DEPENDENCIES 10
4.7 PROJECT RISKS 13

5 BUSINESS REQUIREMENTS 14

5.1 USER MANAGEMENT - MANAGE ADMINISTRATOR ACCOUNT 14
5.2 USER MANAGEMENT - PASSWORD MANAGEMENT 14
5.3 USER MANAGEMENT - MANAGE USERS, ROLES & GROUPS 15
5.4 USER MANAGEMENT - MANAGE USER ACCOUNT ROLE ASSIGNMENTS 15
5.5 SYSTEM - MANAGE ORGANIZATIONAL HIEARCHY STRUCTURE 16
5.6 USER MANAGEMENT - ALLOW MODIFICATIONS DURING SCHOOL YEAR 16
5.7 REIL SCORE - CALCULATE REIL SCORE 17
5.8 REIL SCORE - VIEW REIL SCORE CHANGE REPORT 17
5.9 DATA ANALYSIS - PROVIDE ANALYTIC USER WITH RAW DATA 18
5.10 DATA ANALYSIS - AD-HOC DATA ANALYSIS TOOLS 18
5.11 HUMAN RESOURCES - VIEW TOTAL SHARED REIL SCORE PAYMENT REPORT 19
5.12 HUMAN RESOURCES - VIEW HR DATA 19
5.13 HUMAN RESOURCES - REPORT ERROR IN HR DATA 19
5.14 HUMAN RESOURCES - REPORTING OF INTER-RATER & INTRA-RATER RELIABILITY DATA 20
5.15 DASHBOARDS & REPORTS - PROVIDE DASHBOARDS & REPORTS 20
5.16 DASHBOARDS & REPORTS - CUSTOMIZE DASHBOARDS AND REPORTS 22
5.17 VERIFICATION TOOL - VERIFY DATA ASSOCIATED WITH REIL SCORE 22
5.18 VERIFICATION TOOL - RECONCILE ERRORS REPORTED IN VERIFICATION TOOL 23
5.19 VERIFICATION TOOL- LOG ISSUE ABOUT PERFORMANCE AWARD CONTINUUM 23
5.20 VERIFICATION TOOL - OVERRIDE REIL DATA 24
5.21 SYSTEM – PROVIDE SUPPORT SCREENS 24
5.22 SYSTEM - SET-UP NEW SCHOOL YEAR WORKFLOW 25
5.23 SYSTEM - ARCHIVE DATA 25
5.24 SYSTEM - GENERATE & VIEW SYSTEM ALERTS 26
5.25 SYSTEM - PROVIDE TRAINING ENVIRONMENT 26

© 2012 Arizona Department of Education

5.26 System - RDSS Identity Management & Interoperability 27
5.27 System - Secured Login Credentials 27
5.28 System - Auditing Report 27

6 NON-FUNCTIONAL REQUIREMENTS 29

6.1 Availability 29
6.2 Backup and Restore 29
6.3 Capacity 29
6.4 Resource Constraints 30
6.5 Response Time 30
6.6 Scalability 30
6.7 Security 31
6.8 Stability 31
6.9 Minimum User System Capabilities 31

7 GLOSSARY OF TERMS 32

APPENDIX A. SUPPORTING DOCUMENTATION 37

A1. Dashboards 37
A2. Dashboard User Permissions 45
A3. Data Requirements 46
A4. Assigning Evaluators, Evaluatees, Master Educators 50

APPENDIX B. FLOW DOCUMENTS 51

B1. Data Management / Administration and Reporting 51
B2. DMAR / RDSS Relationships 52
B3. REIL DSS Functional Model 53

© 2012 Arizona Department of Education

1 Document Information

1.1 Version History

VERSION HISTORY

ID	Date	Revised By	Reason for change
0.1	16-Feb-2012	Bilal Chaudhry	Initial creation and ongoing definition prior to first business review.
0.2	22-Feb-2012	Joe Frost	Additional data update
0.3	2-Mar-2012	Tara Sprouse	Initial review and update of entire document
0.4	7-Mar-2012	Tara Sprouse	Moved to new BRD template
0.5	9-Mar-2012	Tara Sprouse	Updated business requirements and feedback from team review
0.6	16-Mar-2012	Bilal Chaudhry	
0.7	20-Mar-2012	Tara Sprouse	Update to requirements, non-functional, environment and appendix
0.8	13-Mar-2012	Bilal Chaudhry	
0.9	19-Apr-2012	Tara Sprouse	Updated based on feedback from MCESA on 4/16-17/12
1.0	24-Apr-2012	Tara Sprouse	Prepare document for Sign-off meeting with Kristine scheduled for 4/23/12. This version includes feedback received from Kristine on 4/23/12.

1.2 References

REFERENCES

Supporting Documentation Title	Purpose	Document
Battelle for Kids – Importance of making the Student Teacher Link	White Paper- Battelle for Kids - Importance of making Student Teacher Link	Battele for Kids - Importance of Studer
ESP Revised Proposal	Vendor solution proposed for Course Mapping Pilot	ESP Revised Proposal.pdf
Student Teacher Connection Quick Look AZ-SLDS Signed MOU	SLDS historical documents regarding similar project that may shed light on requirements	Student-Teacher Connection Quick Loo AZ-SLDS Signed MOU.pdf
Infinite Campus	Meeting notes regarding Infinite Campus' ability to correlate % instructional time to student to course to teacher	InfiniteCampus.pdf
Edupoint	Meeting notes regarding Edupoint: Synergy/Genesis to discuss ability to map courses to SCED codes and ability to track % instruction time to a student to a course	Edupoint.pdf
AZ Data Collection Content Options	ESP CourseWalk Documentation	AZ Data Collection Content Options.pdf
Video Bank BRD_03_19_12 Baseline v5_0 final	Video Bank Data Elements have been defined in this BRD.	Video Bank BRD_03_19_12 Baselir
Professional Development BRD_2012_04_04 Baseline final v0_2	Professional Development Data Elements have been defined in this BRD.	Professional Development BRD_201
BRD_EducatorGoalPlan_Final_V1.0	Educator Goal Plan Data Elements have been defined in this BRD.	BRD_EducatorGoalPla n_Final_V1.0.pdf
SMCESA-REIL12041916070	Need to be compliant with GSA – general statements of assurance 2009 standards. America Reinvestment and Recovery Act	SMCESA-REIL120419 16070.pdf

© 2012 Arizona Department of Education

1.3 Stakeholders

STAKEHOLDERS

Organization	Stakeholder Name	Title	Email Contact
MCESA	Dr. Don Covey	County Superintendent of Schools	Don.Covey@mcesa.maricopa.gov
MCESA	Kristine Morris	Chief Deputy Superintendent	Kristine.Morris@mcesa.maricopa.gov
MCESA	Dr. Lori Renfro	Asst Supt, Performance-Based Management Systems	Lori.Renfro@mcesa.maricopa.gov
MCESA	Al Dullum	REIL Data Management System Project Manager	Al.Dullum@mcesa.maricopa.gov
MCESA	Dr. Anabel Aportela	REIL Resource and Sustainability Administrator	Anabel.Aportela@mcesa.maricopa.gov
MCESA	Dr. Lori Shough	Assistant Superintendent	Lori.Shough@mcesa.maricopa.gov
MCESA	Laurie King	Director of Innovative Practices	Laurie.King@mcesa.maricopa.gov
ADE	Mark Masterson	Chief Information Officer, Arizona Department of Education	Mark.Masterson@AZed.gov
ADE	Linda Jewell	Deputy CIO, Arizona Department of Education	Linda.Jewell@AZed.gov
ADE	Pamela Smith	Executive Director of Strategic IT Programs, Arizona Department of Education	Pamela.Smith@AZed.gov
ADE	Jolene Newton	Program Director, Arizona Department of Education	Jolene.Newton@AZed.gov
Learning Mate	Amit Soman	VP Enterprise Solutions, Learning Mate	Amit.Soman@LearningMate.com

1.4 Document Approvals

This document has been approved as the official Business Requirements Document (BRD) for the MCESA REILize Data Management / Administration and Reporting project by the business stakeholders.

Following approval of this document, changes will be governed by the project's change management process, including impact analysis, appropriate reviews and approvals, under the general control of the Master Project Plan and according to the Arizona Department of Education Project Management Office policy.

DOCUMENT APPROVALS

Approver Name	Project Role	Signature/Electronic Approval	Date
Kristine Morris	Business Partner Stakeholder / Advisor		
Jolene Newton	Program Director and Primary Stakeholder Liaison		
Pamela Smith	Executive Director of Strategic IT Programs, Arizona Department of Education		

© 2012 Arizona Department of Education

2 Introduction

The Maricopa County Education Service Agency (MCESA) has undertaken a five-year initiative aimed at improving student academic progress by increasing the effectiveness of teachers and principals. Six local school districts are engaged in the Rewarding Excellence in Instruction and Leadership (REIL) initiative, which is funded by a Teacher Incentive Fund grant from the U.S. Department of Education.

The REIL initiative, at this phase of the project, is comprised of the following modules: Data Management / Administration and Reporting, Observation Tools, Professional Development, Assessment System, Educator Goal Plan, and Video Bank.

- Data Management consists of Course Mapping, Human Resources, Incentive Reporting for Teachers, Verification Tool, and exchange of data.
- Professional Development consists of Online Modules, Face-to-Face Sessions, Online Development Sessions with Registration, Scheduling, progress monitoring and reporting.
- Assessment System includes Authoring, Test Set Up, Administration, Scoring, and Reporting/Analysis.
- Educator Goal Plan module includes Scheduling & Calendar, Evaluation of Results & Approvals, Teacher Support Plans, and Goal Plan Templates.
- Administration & Reporting consists of Dashboards, the REIL score which is comprised of the Observation and Value-Added Scores, Data Analysis, Role-Based Management, Verification of Rosters & Scores, and RDSS setup.

3 Purpose and Scope

3.1 Purpose

The purpose of this document is to describe business requirements of an application completely, accurately and unambiguously in a technology-independent manner. All attempts have been made in using mostly business terminology and business language while describing the requirements in this document. Very minimal and commonly understood technical terminology is used.

This document will require review and approval sign-offs in order to complete this phase of the project and proceed to the next phase of the project.

The document contains the following sections: Introduction, Purpose and Scope, Description of the Project, Business Requirements, Non-functional Requirements, Glossary of Terms, Document Information and if necessary, an Appendix.

The Business Requirements that have been collected and defined in this document as a result of a series of meetings and follow-up interviews with MCESA business owners and stakeholders that occurred between February 12th and April 17th; reviewing and analyzing previously created project documentation posted on the MCESA REIL SharePoint site; additional follow-up email correspondence, and multiple ADE internal reviews of the BRD.

Business owners and stakeholders from MCESA and ADE officials have specified business and key features for the delivery of the Data Management / Administration and Reporting module. The next phase of the project is to consider either building in-house or buying from a third-party vendor. Thus, a request for information (RFI) document will need to be prepared. An RFI is a formal request made, to ascertain whether a vendor's product would be suitable for addressing MCESA's stated business requirements. Assuming that one or more vendor products can satisfy the business requirements, then a request for proposal (RFP) would be prepared and issued. An RFP is a document to elicit formal bids from potential vendors for a product or service. The next step is a comparative analysis between the vendor's responses to the RFP with the in-house response in terms of business requirements coverage and cost estimates to implement and sustain the system.

If the decision is made is to build, then the Functional Specifications Document will be one key deliverable in the next phase of the project. Regardless of whether the solution is built or purchased, a Use Case Document will also be a key deliverable.

© 2012 Arizona Department of Education

The Data Management / Administration and Reporting module will lay the ground work for the data connections to various internal and external systems to allow users to determine the effectiveness of teachers and the academic growth of students. It will provide the data to display in reports and dashboards.

The check marked option below indicates the type of requirements and overall purpose of this documentation:

- ☐ Business requirements for major enhancements to an existing application
- ☒ Business requirements for new application development
- ☐ Business requirements for replacement application development
- ☒ Business requirements for a request for information (RFI)
- ☒ Business requirements for a request for proposals (RFP)

3.2 Scope of Work

The scope of this document is to define and prioritize each business requirement that the new Data Management / Administration and Reporting module needs to encompass. Each business requirement should be stated in clear, concise language and covering one discrete thought or idea. Each requirement should be numbered and associated with a corresponding User Story or expected experience in interacting with the Data Management / Administration and Reporting feature or function, as well as articulating any exceptions and rules.

3.2.1 Out of Scope

3.2.1.1 The Student Teacher Link specific requirements have not been outlined in this document. Student Teacher Link data elements and data fields are still being developed at the time of this BRD. Therefore, any requirements specific to Student Teacher Link are out of scope for this BRD.

3.2.1.2 In future non-REIL Districts may pay for access to RDSS. Paying for access is out of scope for this release.

4 Description of the Project

4.1 Description

The major goals and objectives of the Data Management / Administration and Reporting module are to provide the following key features and functions:

- Create data pathways to exchange information between ADE and other disparate systems
- Provide Teacher performance and student growth information to RDSS
- Include the following:
  - Course Mapping data
  - Student Teacher Link data
  - REIL Score (Value-added and observation score calculations)
  - Data Analysis
  - Human Resources information about financial incentive payment to districts
  - Maintenance / Support Screens
  - Verification Tool
  - Dashboards and Reports
  - User Management
  - Connection to each participating District's SIS and HR system

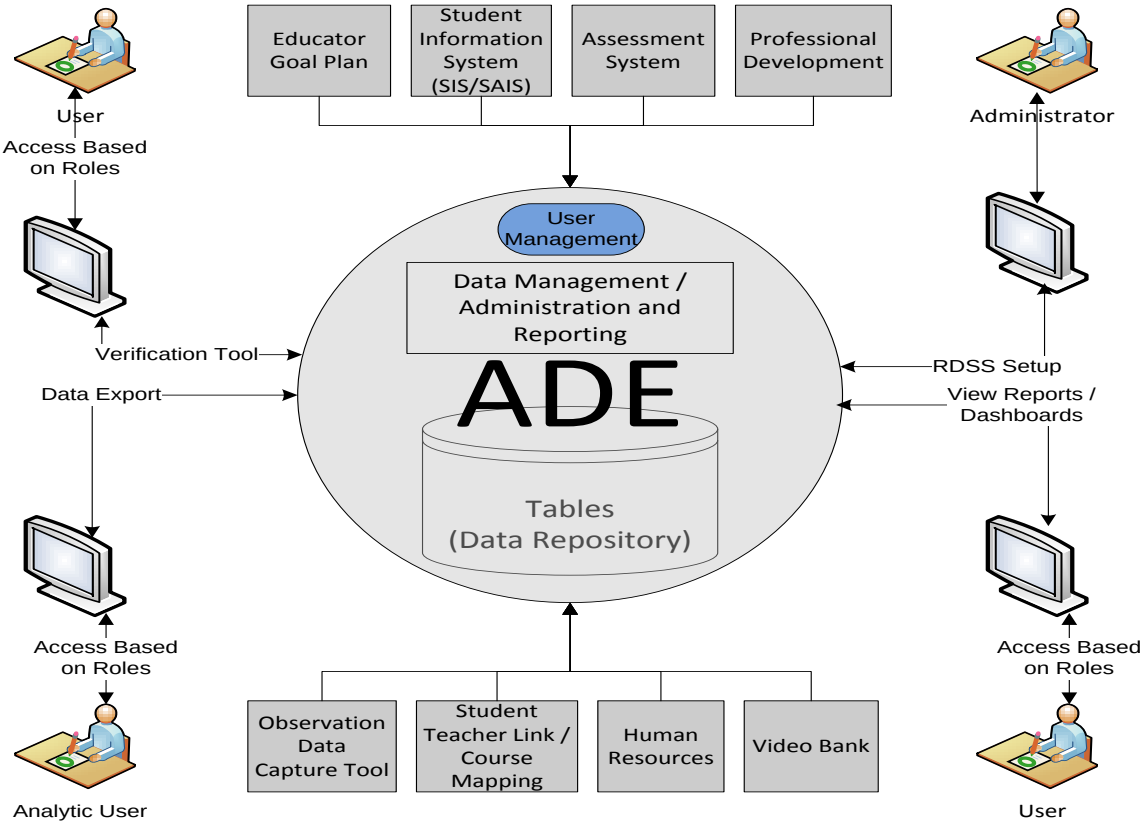
© 2012 Arizona Department of Education

4.2 Rationale

The overarching rationale and benefit of implementing a Data Management / Administration and Reporting module is that it will provide School Districts with the tools and "best practices" systems by which they can view and integrate data from Human Resources & Payroll, Administrative and Reporting functions to effectively manage MCESA REIL program objectives. But the Data Management and Administration & Reporting module alone cannot achieve the overall MCESA REIL objectives, as it needs to interface with other modules to deliver a total solution as articulated in the REIL grant.

4.3 Environment

The diagram below illustrates the Data Management / Administration and Reporting environment and the context of the applications internal and external interfaces.



4.4 User Characteristics

The following is a list of known user types that are expected to interact with the Data Management / Administration and Reporting module. This may not be an exhaustive list.

The Users may be physically located in schools, district offices, as well at the MCESA office. An Education Professional is expected to have limited access to the features and functions available on the site as opposed to an Administrator. Generally speaking, it is expected that the Administrators will require a higher-level and more extensive training program in the use of this new application.

The following table describes the Users identified to date, along with a description and brief statement about potential interaction with the Data Management / Administration and Reporting module, the skill level that may be required and their general role. Skills

© 2012 Arizona Department of Education

levels are ranked high for requiring a significant amount of knowledge and skill to interact with the functionality; medium for a mid-level knowledge, to low, for a small amount of knowledge and skill.

User(s)	Description	Skill Level	Role(s)
MCESA Employee	• Should be able to access and perform any function in the DMAR module associated with the role of a Local Administrator • Should manage setup and configuration • Should manage User accounts and permission including assigning roles to users • Should be able to override the rights of other Users • Should have full visibility to any User in the system including reports, transcripts, and dashboards	High	Super User
MCESA Employee(s): • Peer Evaluator • REIL Field Specialist	• Should have same capabilities as an Education Professional • Should have access to view dashboards and reports • Should have access privileges to modify information that is parented in DMAR if there is any based on their user management role to be defined in the functional requirements.	High	Local Administrator
School Personnel: • Principal • Assistant Principal District Office Personnel: • Superintendent • Assistant Superintendent • HR Director MCESA Employee(s): • Peer Evaluator • REIL Field Specialist	• Should have access to modify information based on their user management role to be defined in the functional requirements. • Should have access to resolve errors related to the REIL Score data components reported by the Education Professional. • School Personnel and the Assistant Superintendent will not be able to view the actual evaluation scores unless it is for an Education Professional they are assigned to evaluate. The Superintendent and HR Director are allowed to see all observation data. Note: the level of visibility to Education Professional DMAR reports and data is dependent upon whether or not the Education Administrator is a person at the School, District Office, or a MCESA Employee. For example District Office personnel should be able to access reports and data for anyone in a school within their district. School personnel should be able to access reports and data for anyone within their school, only.	High	Education Administrator
MCESA Employee(s): • Assigned Staff Resource • Data Analytics Vendor	• Should have access to view dashboards and reports • Should have access to raw data including extracts in order to perform further analysis. • Should have access to REIL Score and Value-Added calculation formulas	High	Analytic User
TBD	• Should have access to graphical user interface support screens to resolve data issues.	High	Customer Support User
School Personnel: • Principal • Assistant Principal • Teacher • Master Educator MCESA Employee(s): • Peer Evaluator	• Should have access to modify information based on their user management role to be defined in the functional requirements. • May work at more than one school in the same District (Peer Evaluator can work at more than one District) • Should be able to review their personal information	Medium	Education Professional

© 2012 Arizona Department of Education

User(s)	Description	Skill Level	Role(s)
	in DMAR with Education Administrator and approve any changes • Should be able to have access to input information into the Verification Tool in regards to disputes and Appeals. • Should receive a REIL Score.		
Anyone accessing the REIL DSS	• Should have read-only access to any published public content on the site • Should have read-only access to any marketing collateral • Should not have access to any dashboard reports or any data exposed by DMAR	Low	Visitor

4.5 General Constraints

ID	Constraint
4.5.1	The System will use the most current browser technology and be compatible with the following commonly used browsers: Internet Explorer 7 and above, Chrome 1.5 and above, Safari 4.0 and above, and Firefox 8.0 and above, Firefox Mobile.
4.5.2	Interfaces will be compatible with appropriate existing ADE systems.
4.5.3	There will be IT support personnel (Super User, Database Administrators, etc.) to create/maintain the data interface, and any infrastructure needs.
4.5.4	Changing the rubric will affect downstream reporting, Year over Year reporting, and dashboards. Rubric changes affect how calculations are made within the system. If the rubric changes, it will require significant re-build of all modules in the RDSS. Below are a few examples of changes to be completed if the rubric changes: • The links to videos that are tagged to each rubric scale may need to be updated. • The links in PD and Video bank to videos that are tagged to rubric elements may need to be updated. • If the rubric changes then it may complicate analysis when performing year over year analysis since the values may not be aligned.
4.5.5	A reliable link between Course, Student, Teacher, Instructional time must be established.
4.5.6	Data that is stored or used by DMAR should be CEDS compliant according to the version adopted by ADE.
4.5.7	The System will work with the following Operating Systems (Version number and above): Windows 7, Android 2.2, Mac OS 10.5, iOS 4

4.6 Assumptions and Dependencies

4.6.1 Assumptions

This section describes major assumptions that were made prior to or during the Business Requirements gathering and documentation.

ID	Assumption	Implications
4.6.1.1	There will be a means to provide value-added data to the Data Management / Administration and Reporting System.	Without this process/system the value-added data and other statistical data is not reportable in the RDSS.

© 2012 Arizona Department of Education

4.6.1.2	Student-Teacher Link is created and managed by an external application and will provide the percentage of instructional time to the Data Management / Administration and Reporting System.	If the student-teacher-course link is not created the percentage of instructional time and value-added data cannot be reported in the RDSS.
4.6.1.3	Course Mapping is completed and managed by an external application and will provide course mapping data to the Data Management / Administration and Reporting System.	If each REIL District does not have their course catalogue mapped to common state-wide SCED codes, then courses cannot be statistically compared across districts.
4.6.1.4	District Human Resources application(s) will provide HR and Personnel data to the Data Management / Administration and Reporting System.	If District HR applications are not linked to the system HR and Personnel data will not be accessible to RDSS users.
4.6.1.5	Observation Data Capture Tool will provide the observation data to the Data Management / Administration and Reporting System.	Without this link the observation data and scores cannot be reported in the RDSS.
4.6.1.6	Student information data will be provided to the Data Management / Administration and Reporting System. Note: This information will initially be provided by ADE as verified data, however in the future the data should be received real-time from the districts.	Without this data, key student demographics will not be reportable within RDSS.
4.6.1.7	Educator Goal Plan module will be identified and provide data to the Data Management / Administration and Reporting System.	Without this data the Educator Goal Plan data (such as EGP dashboards) will not be reportable within RDSS.
4.6.1.8	Video Bank module will be identified and provide data to the Data Management / Administration and Reporting System.	Without this link the Video Bank content will not be accessible within RDSS.
4.6.1.9	Professional Development system will be identified and linked to the Data Management / Administration and Reporting System. The term Professional Learning Resources is sometimes used in the same context defined here.	Without this link the Professional Development data will not be reportable within RDSS.
4.6.1.10	AIMS data collected is accurate, current, and provided to DMAR.	Without accurate and current data, any analysis and calculations using this data will lead to incorrect conclusions. Incorrect data may impact the REIL Score and REIL Payment.
4.6.1.11	The SIS for each REIL District has the capability of linking Teacher to Teacher-Instructional-Minutes to a student to a course.	Without the ability to determine the percentage of instructional time for a teacher to a student, it is impossible to measure the amount of time a teacher spent instructing a student.
4.6.1.12	Data Management / Admin and Reporting (DMAR) module which encompasses dashboard reporting shall provide the visibility to video as it relates to other content from within REIL DSS including but not limited to standards.	If not true, then the reporting will need to be included in another module otherwise the video-standard and other video-content linkages will not be available.
4.6.1.13	Observation Inter-rater reliability statistics will come from an outside vendor (BASIS) for the 2011-2012 school year and provided to DMAR. Beginning with 2012-2013 school year RDSS will perform the calculations. Once RDSS is performing the calculation, it should be performed monthly.	RDSS will be responsible for generating reliability statistics starting in 2012-2013 school year.

© 2012 Arizona Department of Education

4.6.1.14	The RDSS does not have the ability to make corrections to District Data Systems or ADE Data systems directly where data is parented.	The changes need to be made in the source system where the data is actually parented and then it should be provided to the DMAR.
4.6.1.15	MCESA will send REIL Payment funds to districts outside of the RDSS. However, RDSS must provide the ability to generate an action request for the amount of the payment that the teacher will receive with employee information.	Payments to districts will not be handled in the RDSS.
4.6.1.16	Audit tracking will be enabled for the DMAR module so that all user activity is captured from logging into and exiting the system, including actions taken.	Without audit tracking user changes cannot be tracked.

4.6.2 Dependencies

This section describes dependencies between the Application for which these Business Requirements are written and other applications, databases, and/or processes.

ID	Dependency
4.6.2.1	The mapping of the LEA course catalogue to the State Catalogue. Note: this is currently being performed by CourseWalk.
4.6.2.2	User Management solution is in place for identifying users, roles, and permissions
4.6.2.3	System will have access to source containing accurate and current AIMS test data (ADE Assessments database)
4.6.2.4	BASIS providing the formula for calculating REIL score for the 2012—2013 school year. Note: this dependency goes away after the 2012-2013 school year.
4.6.2.5	Student Teacher Link, Human Resources, ODCT, SAIS, Video Bank, Assessment System, Professional Development, and Educator Goal Plan applications, systems or modules, wherever they may reside will interface and provide video content and/or data referenced and accessed in this module.
4.6.2.6	The REIL calculations are performed once the assessment and observation data has been verified by Education Professionals and/or Education Administrators. The REIL calculations are performed using only verified data.
4.6.2.7	The ESP Solution has the ability to maintain the original fields of the course information that the school sent to the ESP solution so that when the data returns to the original school, their particular coding and naming conventions are retained and maintained, so that in RDSS both the school code and SCED code are displayed.
4.6.2.8	RDSS will link to participating Districts' HR Systems to display and utilize personnel data for analysis and reporting purposes.
4.6.2.9	RDSS will provide the ability to see School Improvement Plans from ALEAT.
4.6.2.10	The system will provide a link to the Video Bank module in Dashboards so videos can be selected for viewing.
4.6.2.11	Solution to capture the instructional time component as well as the relationship between Teacher, Student, and Course will be available. At a minimum, the solution needs to account for : • Multiple teachers teaching the same course. • Multiple teachers teaching the same student for varying lengths and duration. • Courses of varying duration (e.g., semester, quarter, six-week blocks). • Courses of varying length (e.g., block scheduling). • "Pull-out" strategies that take students out of the classroom. • Extended teacher absences (e.g., maternity leave). • The following classroom configurations will be captured by the tool: self-contained, pull-out

© 2012 Arizona Department of Education

	programs, team-teaching. • DMAR needs to have access to the Teacher of Record for each student in each course.
4.6.2.12	A Verification Tool will be available to verify attributes such as class rosters, REIL Scores, Payment amounts.

4.7 Project Risks

This section describes the identified risks to success as determined during the course of requirements gathering and definition. The business may already be aware of some of these, but they will be listed here as a reminder and confirmation of MCESA business and ADE Information Technology awareness, even if the current status is "Retired".

ID	Project Risk	Implications	Severity	Status
	None identified at this time			

© 2012 Arizona Department of Education

5 Business Requirements

The priority definitions used in the business requirements are listed below.

Priority	Description
Critical	This level requirement meets MCESA REIL grant criteria and must be included in the initial release of the project.
High	This level requirement meets criteria to be vetted with business owners and stakeholders before inclusion in the initial release of the project.
Medium	This level requirement is considered a "nice to have" item that has been vetted with customer for possible inclusion within a future release of the project.
Low	This level requirement meets criteria to be excluded from initial release of project, but should be tracked as a potential enhancement to be vetted with business owners and stakeholders for possible inclusion with a future release of the project.

5.1 User Management - Manage Administrator Account

BR-01	
Priority:	Critical
Release:	Initial
User Story:	As a Super User I want the ability to create and manage user account that can perform system administration functions.
Application:	DMAR
Description:	The system shall provide the capability for a User to create and manage administrator user accounts. A user account may be created and granted to one or more administrator roles and/or permissions in order for them to access various administrative features and functions . The system should allow the User to browse or search User Accounts including those that are administrators with appropriate filters in order to more quickly locate the persons I want to view and manage. This should include a print list function. The report should feature export options including saving as a PDF, XLS or CSV as appropriate. The reports should be able to produce a printer-friendly copy to a local printer.
Exceptions:	None identified at this time.
Rules:	The following business rules apply to this requirement:
5.1.1 None identified at this time.	

5.2 User Management - Password Management

BR-02	
Priority:	Critical
Release:	Initial
User Story:	As a Super User I want the ability to manage passwords individual users as well as groups of users.
Application:	DMAR
Description:	The system shall provide the capability for a User to grant, modify, delete, inactivate, and revoke access passwords for any to which they are authorized to view.

© 2012 Arizona Department of Education

BR-02	
Exceptions:	The system should provide a method to automate a password reset in case the User has forgotten their User ID and/or Password.
Rules:	The following business rules apply to this requirement:
5.2.1	Password encryption is required in order to visually disguise the entry keyed in on a login screen (e.g. the use of asterisks).
5.2.2	The strength of password setting may be required to be very strong to reduce the ability for unauthorized personnel to view other User's data.

5.3 User Management - Manage Users, Roles & Groups

BR-03	
Priority:	Critical
Release:	Initial
User Story:	As a Super User I want the ability to create and manage user accounts, roles and permissions including their access levels, and groups and group membership so I can manage who has access to what features and functions as well as the data they should be able to view. This requirement includes all appropriate functionality such as create, edit, delete, disable, revoke, etc.
Application:	DMAR
Description:	The system shall provide the capability for a User to create and manage User Accounts, Administrator Permissions and/or Roles as well as Groups, including group memebership and their ability to access and view data as well as features and functions available on the site. The system should allow the User to browse or search User Accounts, Roles and Groups with appropriate filters in order to more quickly locate the items I want to view and manage. This should include a print list function. The report should feature export options including saving as a PDF, XLS or CSV as appropriate. The reports should be able to produce a printer-friendly copy to a local printer.
Exceptions:	None identified at this time.
Rules:	The following business rules apply to this requirement:
5.3.1	None identified at this time.

5.4 User Management - Manage User Account Role Assignments

BR-04	
Priority:	Critical
Release:	Initial
User Story:	As a Super User I want the ability to manage the assignment of Roles/Permissions to User Accounts or User Accounts to Roles/Permissions in order to manage access to various features and functions.
Application:	DMAR
Description:	The system shall provide the capability for a User to to assign roles to users. For example, the User can assign the Peer Evaluator or Master Educator role(s) to the Teachers they will evaluate.
Exceptions:	None identified at this time.

© 2012 Arizona Department of Education

BR-04	
Rules:	The following business rules apply to this requirement:
5.4.1	MCESA Administrators must have the ability to assign Peer Evaluators across Schools and Districts.
5.4.2	An Education Professional or Education Administrator may work at more than one school within the same district. The Peer Evaluator may be able to work at more than one school across multiple districts.

5.5 System - Manage Organizational Hiearchy Structure

BR-05	
Priority:	Critical
Release:	Initial
User Story:	As a Super User I want the ability to manage the entire organizational hierarchy structure in order to ensure that it reflects the reporting structure required by the state of Arizona.
Application:	DMAR
Description:	The system shall provide the capability for a User to define and build the organizational hierarchy structure which should include but not necessarily limited to the state, regional service centers, counties, school districts, schools, etc. The system shall provide the capability to create each of these different entitities and then create and manage, their releationships to each other, as well as any changes that may be required subsequently.
Exceptions:	None identified at this time.
Rules:	The following business rules apply to this requirement:
5.5.1	None identified at this time.

5.6 User Management - Allow Modifications During School Year

BR-06	
Priority:	Critical
Release:	Initial
User Story:	As a Super User I want the ability to make modifications during the school year so I can maintain accurate and current information.
Application:	DMAR
Description:	The system shall provide the capability for a user to allow changes during a school year. These include changing administrators and teachers, adding/removing administrators and teachers, course name changing, adding/removing a district to the REIL program. The changing of a course description can take place via a maintenance screen.
Exceptions:	None identified at this time.
Rules:	The following business rules apply to this requirement:
5.6.1	None identified at this time.

© 2012 Arizona Department of Education

5.7 REIL Score - Calculate REIL SCORE

BR-07	
Priority:	Critical
Release:	Initial
User Story:	As a Super User, I want to schedule the system to perform the REIL Score calculations so that educators receive a REIL score and corresponding REIL Performance Award
Application:	DMAR
Description:	The system shall provide the capability for the system or a user to perform all REIL Score calculations beginning with the 2013-2014 school year. MCESA will provide the REIL Score 'formulas'. REIL Scores will be provided by BASIS Policy Research for the 2012-2013 school year. These scores must be imported into the RDSS for dashboard displays.
Exceptions:	None identified at this time.
Rules:	The following business rules apply to this requirement:

5.7.1	REIL Score is calculated once a year.
5.7.2	There will be multiple REIL Score calculations.
5.7.3	The REIL Score calculation used will depend upon the type of educator (e.g., teachers, principals) being scored.
5.7.4	The System shall generate a letter (Award Letter) to the Education Professional informing them of their REIL Score, REIL Payment amount, and an explanation of the REIL Score Calculation. (e.g. Include this information in a dashboard with an electronic signature function.)
5.7.5	System must have the ability to perform multiple REIL Score calculations (e.g. REIL has 5+ observations; REIL 2 has only 2 observations) and be able to distinguish between them.
5.7.6	The system shall provide the ability to recalculate the REIL Score for all users, as well as be able to recalculate the REIL Score for individual users.

5.8 REIL Score - View REIL Score Change Report

BR-08	
Priority:	Critical
Release:	Initial
User Story:	As an Education Administrator I can view a report of all changes in the REIL score if a REIL Score has been re-calculated.
Application:	DMAR
Description:	The system shall provide the capability for a user to request and view the REIL score that is recalculated system-wide (or for an individual). The report should show all changes for the REIL score since the last time it was run. The report should also indicate the user who initiated the re-calculation.
Exceptions:	None identified at this time.
Rules:	The following business rules apply to this requirement:

5.8.1	None identified at this time.

© 2012 Arizona Department of Education

5.9 Data Analysis - Provide Analytic User with Raw Data

BR-09	
Priority:	Critical
Release:	Initial
User Story:	As an Analytic User, I want access raw data from the RDSS in order to perform statistical analyses outside of the RDSS.
Application:	DMAR
Description:	The system shall provide the capability for a user to access and extract raw data from the RDSS. The specific Analytic User and the type of analysis will vary. The RDSS must have a way to provide any data in a "raw data form" (in a file format conducive to analysis, e.g., .csv, .xls) to analytic users. The preference is for the Analytic user to be able to run canned queries/reports. For the 2012-2013 school year, the Analytic User (Basis Policy Research) will need all of the data gathered through the ODCT Suite of tools as well as AIMS scores, from the assessment system, data verification system, and student demographics.
Exceptions:	None identified at this time.
Rules:	The following business rules apply to this requirement:
5.9.1	Analytic user will be given access to raw data from the system in a secure manner.
5.9.2	A confidentiality agreement may be required due to the sensitive nature of the data in accordance with FERPA.
5.9.3	File Interface Agreements must be in place between the Analytic User and MCESA, outlining the specific data fields required from the RDSS.
5.9.4	Analytic user has 24/7 access to access the raw data.

5.10 Data Analysis - Ad-Hoc Data Analysis Tools

BR-10	
Priority:	Critical
Release:	Initial
User Story:	As a MCESA Employee I need to perform ad hoc analyses of raw RDSS data and make those available to RDSS users.
Application:	DMAR
Description:	The system shall pprovide the capability for a User to perform additional calculations, for example, correlations, cross tabulations, predictive models, etc. using raw data extracts and advanced ad-hoc reporting tools.
Exceptions:	None identified at this time.
Rules:	The following business rules apply to this requirement:
5.10.1	None identified at this time.

© 2012 Arizona Department of Education

5.11 Human Resources - View Total Shared REIL Score Payment Report

BR-11	
Priority:	Critical
Release:	Initial
User Story:	As a Local Administrator I want the ability to generate and send a report to districts with the total amount of REIL incentives, broken out by the district portion and the REIL portion of payments.
Application:	DMAR
Description:	The system shall provide the capability for a user to send the district a report of the total REIL incentives to be paid out to educators, broken out by the portion for which the district is responsible and the portion for which REIL is responsible. This will allow the District Business Official to know how much incentive money the district will receive from REIL.
Exceptions:	
Rules:	The following business rules apply to this requirement:
5.11.1 RDSS will generate and send information to district HR/Payroll departments and district Business official.	

5.12 Human Resources - View HR Data

BR-12	
Priority:	Critical
Release:	Initial
User Story:	As an Educational Professional I want the ability to view my demographic information so that I can confirm its accuracy.
Application:	DMAR
Description:	They system shall provide the capability to allow the user to view their demographic information. The following data fields are examples of what may be displayed: Total years of teaching experience, Total years in district, Teacher Attendance, Hire Date, Certifications, Date of Birth, Is on Improvement Plan?, Is on Administrative Leave?, Status (Continuing, non-continuing), Compensation (Salary, Benefits, Add-ons/Augmentations), etc. Please refer to Appendix for full list of data elements. Note: Assumption is all data is available from the District HR system.
Exceptions:	Some data elements may reside in somewhere other than the District HR system.
Rules:	The following business rules apply to this requirement:
5.12.1 Data elements should be retrieved from the most reliable source for the information.	

5.13 Human Resources - Report Error in HR Data

BR-13	
Priority:	Critical
Release:	Initial

© 2012 Arizona Department of Education

BR-13	
User Story:	As an Educational Professional I want the ability to report an error in the Demographic data viewable in RDSS so that I can have any errors corrected.
Application:	DMAR
Description:	The sytem shall provide the capability for a User to report an error in the Demographic data viewable in RDSS in order to get any confirmed errors corrected. Reporting an error should trigger an alert and/or send an email to the contact person of the source data. For example, this could be the District HR or IT Director or someone at ADE depending on the source data. This is the mechanism through which errors in the Districts' HR data will be corrected.
Exceptions:	None identified at this time
Rules:	The following business rules apply to this requirement:
5.13.1	The person sending the error request receives a confirmation that the notification has been delivered to the appropriate person (provide name). They also should receive a notification when the error has been corrected. Data will be corrected in the source system by the district.

5.14 Human Resources - Reporting of Inter-Rater & Intra-Rater Reliability Data

BR-14	
Priority:	Critical
Release:	Initial
User Story:	As an Education Administrator (e.g. Evaluators), I want the ability to view Inter-Rater and Intra-Rater reliability data so I can determine training needs and to evaluate the principals and assistant principals.
Application:	DMAR
Description:	The sytem shall provide the capability for a User to view inter-rater reliability analyses.
Exceptions:	None identified at this time.
Rules:	The following business rules apply to this requirement:
5.14.1	The amount of data a person can view will be determined on the role/permissions of that user, as well as where they are placed in the organization hierarchy. Examples: A principal can see the data for only their school. A Superintendent can view for all schools in their entire district.

5.15 Dashboards & Reports - Provide Dashboards & Reports

BR-15	
Priority:	Critical
Release:	Initial
User Story:	As a user I want access to dashboards and reports so that I can have a highly visual and intuitive presentation of critical information in the RDSS to understand status trends. The dashboards should allow me to drill over to other dashboards to report details.
Application:	DMAR
Description:	The system shall provide the capability for a logged in User to access and view graphical style

© 2012 Arizona Department of Education

BR-15	
	dashboards; appropriate to the role and/or permissions they have been assigned. The reports shall include use of various filters to provide flexibility in getting the desired report output. The reports should feature export options including saving as a PDF, XLS or CSV as appropriate. The reports should be able to produce a printer-friendly copy to a local printer. Examples of dashboards may include but are not limited to the following: • REIL Profile dashboard including details such as REIL score, observation score, value-added data, REIL payment, career pathway information, salary augmentations, historical data, REIL score range • Dashboard to track school and district performance and progress toward completing various REIL grant requirements • Professional Learning Resources dashboard that illustrates the relationship between Professional Development and the corresponding observation scores. • Dashboard to track Education Professional progress that displays those who have low observation and/or value-added scores. • Observation data dashboard that displays current and historical data trends grouped by each rubric element and relationship on value-added to observation score. • Student data dashboard including AIMS, district assessments, REIL custom assessments, AZ content standards and common core standards. • Human Resources dashboard that displays Education Professional and Education Administrator training and other performance data by school and by grade. • Finance Information dashboard to view financial, budget and salary data. • Demographic errors dashboard to display all errors that have been reported. • Public facing dashboard to display non-secure data that is viewable to the general public. • Award Letter dashboard to display the REIL Score, REIL Payment amount, and an explanation of the REIL Score Calculation. (Possibly include an electronic signature function or prompts to acknowledge REIL Score.) Examples of dashboards may include but are not limited to the following: • Report that provides a list of any unassigned teacher and administrator for evaluations. • Login statistics report containing user login statistics for RDSS. • Scores report containing aggregated Teacher scores for each rubric element, by school and district. •Scores over time report containing historical aggregated Teacher scores for each rubric element, by school and district. • Observations / value-added data correlations report containing: • Correlations between principal observations and value-added scores • Correlations between observation score and student assessments by school • Assignment report containing a list of principals assigned to each primary and secondary evaluator. • Refinements and recommendations report information grouped by teacher for observations and educator goal plans.
Exceptions:	None identified at this time.
Rules:	The following business rules apply to this requirement:
5.15.1	User must have the proper credentials in order to access the dashboards and reports.
5.15.2	Dashboards must drill down to the most granular level, depending on user permissions and accessibility to individuals and their data.

© 2012 Arizona Department of Education

5.16 Dashboards & Reports - Customize Dashboards and Reports

BR-16	
Priority:	Critical
Release:	Initial
User Story:	As a user, I want the ability to add and remove custom fields to a dashboard report and create my own customized dashboard report in order to address my own unique reporting needs.
Application:	DMAR
Description:	The system shall provide the capability to allow the User to add and remove custom fields to a dashboard report and create customized dashboard reports.
Exceptions:	None identified at this time.
Rules:	The following business rules apply to this requirement:
5.16.1	User must have the proper credentials in order to customize a dashboard.

5.17 Verification Tool - Verify Data Associated With REIL Score

BR-17	
Priority:	Critical
Release:	Initial
User Story:	As an Education Professional, I want the ability to verify the data associated with my REIL Score so that I can ensure the information is correct and report erroneous data.
Application:	DMAR
Description:	The system shall provide the ability for an Education Professional to view, verify and report errors found in relation to the data associated with their REIL Score. (E.g. REIL Score, REIL Payment Amount, School Information, Team Information, Value-Added Data, Evaluator, Observation Information) The system shall provide an alert and/or e-mail mesage to notify the Education Administrator.Note: A Teacher can verify additional information such as Instructional Time, Course Assigned, Students on Roster)
Exceptions:	None identified at this time.
Rules:	The following business rules apply to this requirement:
5.17.1	User must have the proper permissions in order to verify data. The Education Professional may only view their own data.
5.17.2	Course information will be re-verified each time it is changed.
5.17.3	Each evaluator assigned to an evaluatee must be verified, there may be multiple evaluators assigned.
5.17.4	All components (rubric elements and REIL score) of an observation must be verified within a specified time.
5.17.5	Provide the capability to set a cycle configuration option related to rule 5.17.4 above in order to set the verification window. (E.g. A setting of 5 days would require the data to be verified within 5 days.)
5.17.6	REIL score and payment will be verified each time the REIL score is calculated. Note: The formula used to calculate the REIL score will be viewable by the Education Professional.
5.17.7	Value added data will be verified each time the Value Added is calculated. Note: the value-added data to be verified has not been fully defined at this time.

© 2012 Arizona Department of Education

BR-17	
5.17.8	The percentage of instructional time will be verified monthly. (Provide a method to configure frequency.)
5.17.9	The Education Professional must perform an action in order to "Verify" data.
5.17.10	Provide the ability to verify the entire roster with a single action.
5.17.11	Student Roster will be verified monthly. (Provide a method to configure frequency.)
5.17.12	User can view the formula used to generate their REIL Score.
5.17.13	User can view their REIL Score at any time after it has been calculated.
5.17.14	User can access historical REIL scores except any that may have been archived.
5.17.15	Data issues reported should be viewable by an Education Administrator (e.g. the teacher's principal).

5.18 Verification Tool - Reconcile Errors Reported in Verification Tool

BR-18	
Priority:	Critical
Release:	Initial
User Story:	As an Education Administrator, I want the ability to edit data reported in the Verification Tool so that I can resolve erroneous data logged and reported by an Education Professional.
Application:	DMAR
Description:	The system shall provide the capability for an Education Administrator to edit and resolve data errors submitted by an Education Professional. (E.g. Course Assignment, Evaluator, School Information, Team Assignment, Instructional Time, Teacher of Record, Assignment of Teachers to Courses, Assignment of Students to Teachers, Assignment of Students to Courses) Note: This information will initially be provided by ADE as verified data, however in the future the data should be received real-time from the districts.
Exceptions:	None identified at this time.
Rules:	The following business rules apply to this requirement:
5.18.1	User must have the proper credentials in order to edit data.
5.18.2	Generate an alert or e-mail to the person who reported the error to notify them of the status.

5.19 Verification Tool- Log Issue about Performance Award Continuum

BR-19	
Priority:	Critical
Release:	Initial
User Story:	As an Education Professional, I want the abilily to log an issue about my placement on the performance award continuum.
Application:	DMAR
Description:	The system shall provide the ability for an Education Professional to log an issue about their placement on the performance continuum. Note: The process has not been fully defined.
Exceptions:	None identified at this time.

© 2012 Arizona Department of Education

BR-19	
Rules:	The following business rules apply to this requirement:
5.19.1	User must have the proper credentials in order to submit an issue.
5.19.2	Provide the ability to display the Issue status (e.g. reported, in progress, closed) within RDSS in order to track the progress through the issue resolution process.
5.19.3	Provide the ability to set a specific window of time that an issue can be submitted.
5.19.4	Generate an alert or e-mail to the person submitting the issue to notify them of the status.

5.20 Verification Tool - Override REIL Data

BR-20	
Priority:	Critical
Release:	Initial
User Story:	As a Super User, I want the ability to override data associated with the REIL Score so that I can resolve issues reported by an Education Professional.
Application:	DMAR
Description:	The system shall provide the ability for a Super User to override data values associated with the REIL Score (e.g. REIL payment amount. REIL score, Value-Added data)
Exceptions:	None identified at this time.
Rules:	The following business rules apply to this requirement:
5.20.1	User must have the proper permissions in order to override data.
5.20.2	System must record each add, change, or delete of REIL Score data by maintaining an 'audit' trail within the system and providing an audit change log report.

5.21 System – Provide Support Screens

BR-21	
Priority:	Critical
Release:	Initial
User Story:	As a Customer Suport User I want the ability to correct data errors through a graphical user interface in order to avoid the need to perform back-end database updates. Note: This will only be used for data parented within RDSS.
Application:	DMAR
Description:	The system shall provide the ability to correct data errors through a graphical user interface in order to avoid the need to perform back-end database updates.
Exceptions:	None identified at this time.
Rules:	The following business rules apply to this requirement:

© 2012 Arizona Department of Education

BR-21	
5.21.1	Maintenance Screens shall be integrated across all modules

5.22 System - Set-up New School Year Workflow

BR-22	
Priority:	Critical
Release:	Initial
User Story:	As an Education Administrator (i.e. District user) I want the ability to set-up the system configuration, calendars, and workflow for a new school yearin RDSS.
Application:	DMAR
Description:	The system shall provide the capability for a User to manage the set-up of the system configuration, calendars, and workflow for a new school yea in RDSS. This includes the assignment of workflow to users, Dist. calendar and school calendar In setting up a New School Year workflow, the following steps must be taken in this order: 1. Setup District Calendar 1a. Setup Open Dates / Blackout Dates 2. Setup School Calendar 2a. Setup Open Dates / Blackout Dates. (Blackout dates are those dates that observations can not be scheduled) 3 Set RDSS Calendar Dates 4 MCESA Relationship Setup (Observations) 5 District Relationship Setup (Observations) 6 School Relationship Setup (Observations) 7 Master Educator Relationship Setup (Value-added)
Exceptions:	
Rules:	The following business rules apply to this requirement:
5.22.1	School Administrator can set up a District Calendar where this user can add category event types and specify dates as available or not available (blackout dates). Events may fall into category types (e.g., PD days, Student Assessment, early release days, etc.). Not all event types result in blackout dates.
5.22.2	District Administrator has access privileges to modify the district calendar
5.22.3	School Administrator has access privileges to modify the school calendar

5.23 System - Archive Data

BR-23	
Priority:	Critical
Release:	Initial
User Story:	As a local administrator, I would like the capability to archive records in order to remove older content and free up space since the data no longer needs to be viewable.
Application:	DMAR
Description:	The system shall provide the capability for a user to archive DMAR data.

© 2012 Arizona Department of Education

BR-23	
Exceptions:	None identified at this time.
Rules:	The following business rules apply to this requirement:
5.23.1	User must have the proper credentials in order to archive data.
5.23.2	The age of the data will determine whether or not that it may be archived. The archival rules to that end have not yet been defined since there are numerous data points and relationships.

5.24 System - Generate & View System Alerts

BR-24	
Priority:	Critical
Release:	Initial
User Story:	As a user, I want to view any alert messages that I may have and navigate to the appropriate feature or function in order to address them.
Application:	DMAR
Description:	The system shall provide the capability for a User to view alert messages and navigate to the appropriate screen or page. Some examples of alerts include: • Notification that an error has either been reported or revised • Notification that an appeal has been submitted • Alerts to inform me when I have received feedback on an error or appeal submitted
Exceptions:	None identified at this time.
Rules:	The following business rules apply to this requirement:
5.24.1	User must have the proper credentials in order to receive alerts.
5.24.2	If the issue or action associated with the alert has been completed, then the alert will cease to display the next time the User logs in.

5.25 System - Provide Training Environment

BR-25	
Priority:	Critical
Release:	Initial
User Story:	As an Education Administrator I need access to an Training Environment so that I can provide training and give presentations without using production data.
Application:	DMAR
Description:	The system shall provide the ability to log into the system as a training user (visitor) and view, enter, delete mock data.
Exceptions:	None identified at this time.
Rules:	The following business rules apply to this requirement:

© 2012 Arizona Department of Education

BR-25	
5.25.1	User must have the proper credentials in order to access the training system.

5.26 System - RDSS Identity Management & Interoperability

BR-26	
Priority:	Critical
Release:	Initial
User Story:	As a User, I want to be able to login only one time in order to access each module to which I have access.
Application:	DMAR
Description:	The system shall provide the capability for a User to only sign-on one time in order to seamlessly access any RDSS module. Therefore, the User will login once and be able to access each module to which they have been granted access permission rather than requiring a separate sign-on for each module independently. Note: The system shall be LDAP 2.0 compliant to provide seamless transfer of credentials between systems.
Exceptions:	None identified at this time.
Rules:	The following business rules apply to this requirement:
5.26.1	System shall be LDAP 2.0 compliant.

5.27 System - Secured Login Credentials

BR-27	
Priority:	Critical
Release:	Initial
User Story:	As a User, I want to be able to login with secured credentials in order to ensure that I only can access features and functions associated with the user role or permissions that I have been assigned.
Module:	TBD
Description:	The system shall provide the capability for an authorized User to sign-on with their login credentials with the role or permissions they have been assigned.
Exceptions:	None defined at this time
Rules:	The following business rules apply to this requirement:
5.27.1	None defined at this time

5.28 System - Auditing Report

BR-28	
Priority:	High

© 2012 Arizona Department of Education

BR-28	
Release:	Initial
User Story:	As a User I want the ability to view an audit change log of all activity within the DMAR module.
Module:	DMAR
Description:	The system shall provide the capability to record in an audit history log each and every change made within the DMAR after an error has been reported. The system shall record in an audit history log each and every change including, but not limited to, the following details: • What operation was performed (e.g. create, edit, copy, delete, archive, etc.) • Who performed the operation • When was the operation performed • A before/after snapshot of the record, field-level image, or comparable approach in accordance with best practices. The system shall provide a full audit log history and reporting capability.
Exceptions:	None defined at this time
Rules:	The following business rules apply to this requirement:
5.28.1 None defined at this time	

© 2012 Arizona Department of Education

6 NON-FUNCTIONAL REQUIREMENTS

6.1 Availability

ID	Requirement
6.1.1	The system needs to be accessible 24 x 7x365, except for periodic maintenance. The schedule should be published and clearly communicated to all system users in advance. A Service Level Agreement (SLA) should be drafted in support of the overall system.

6.2 Backup and Restore

ID	Requirement
6.2.1	The application server and the associated data should have backup and restore capabilities that are part of the ADE Information Technology Department's approved server backup plan.
6.2.2	In the event of a catastrophic failure, the application should be fully functional within 24 hours.
6.2.3	Business expectations for restoration capabilities are that backup and restore processes will be tested for viability once a quarter, beginning with Q3 2012.

6.3 Capacity

The current capacity that the system needs should be based in part on the following estimated for the initial release of the Data Management / Administration and Reporting module. The future capacity is the projected or estimated requirements.

6.3.1 Current

ID: 6.3.1.1

Requirement:

Number of Logged In Users. This is the number of people expected to need login credentials for the REIL and REIL Alliance schools, the district offices, and MCESA office in order to access the REILize Decision Support System.

The estimate is based upon the information pulled directly from the REIL grant. Users included in the tabulation are certified superintendents, principals, other administrators; certified teachers and other certified personnel; classified managers, supervisors and directors. Additionally, the MCESA office is expected to need login credentials for less than one hundred employees. Note: Classified teacher aids and other personnel are not included in this estimate.

Staff Type	REIL Totals	REIL Alliance Totals
Certified --		
Superintendent, Principals, Other Administrators	**139**	**95**
Teachers	**2425**	**1361**
Other	**261**	**913**
Subtotal	**2825**	**2369**
Classified --	**0**	
Managers, Supervisors, Directors	**43**	**71**
Teachers Aids	**367**	**460**
Other	**1429**	**763**
Subtotal	**1839**	**1294**
GRAND TOTALS	**2868**	**2440**

© 2012 Arizona Department of Education

6.3.2 Forecast

ID	Requirement
6.3.2.1	The infrastructure should support the MCESA REILize Decision Support System storage capacities required for the ongoing storage of a rolling ten (10) years of data.
6.3.2.2	A mutually agreeable archiving strategy has yet to be determined between ADE and MCESA; however, the business has determined that whatever archive management approach is decided upon, archived data must be quickly accessible, secure, and online to users of the RDSS.
6.3.2.3	Number of Logged In Users. It is expected that the number of people expected to need login credentials in the future will need to include all schools and school districts in Maricopa County. The planned implementation strategy is not known at this time.

6.4 Resource Constraints

ID	Requirement
6.4.1	At the time of this writing, ADE has not finalized their standard SLA from which to base the service needs of the MCESA REILize Decision Support System.

6.5 Response Time

ID	Requirement
6.5.1	The REILize Decision Support System should be designed to respond to User interactions and operations such as performing a search or refreshing a page within ± 10 seconds.

6.6 Scalability

This section describes the business expectations for IT management of the anticipated growth for the DMAR module. The overall infrastructure must support vertical and horizontal scalability (see Glossary in this document).

6.6.1 User Scalability

ID	Requirement
6.6.1.1	The number of concurrent users is expected to grow from 250 to 5,500 concurrent users (statewide) in the next five years.
6.6.1.2	The total number of users is expected to grow from 2,500 to 55,000 users (statewide) in the next five years.

6.6.2 Application Scalability

ID	Requirement
6.6.2.1	The overall RDSS product is expected to have a 'wrapper' as the front-end design that will complement the yet-to-be designed MCESA web site currently under discussion with a third party vendor.
6.6.2.2	All identified modules linked to RDSS are expected to be capable of full integration with the MCESA REILize Decision Support System (RDSS) product.

© 2012 Arizona Department of Education

6.6.3 Data Scalability

ID	Requirement
6.6.3.1	The MCESA database must be able to accommodate storage of a rolling ten (10) years of data without sacrificing processing and refresh times. If a yet-to-be-determined portion of this data will be archived, it must remain readily available to RDSS users via the archive management processes.

6.7 Security

6.7.1 Authorization and Access Controls

This Authorization and Access Control requirements associated with the roles and permissions for the DMAR module should be similar as to those defined in the Video Bank and other BRD's to ensure consistency in the overall solution. The figure from Video Bank was included only for illustrative purposes.

REIL ROLES	VIEW PUBLIC VIDEO	PRIVATE NON-SECURE VIDEO	VIEW PRIVATE SECURE VIDEO	MANAGE CONTENT	QA	APPROVER/ PUBLISHER	REPORTS	HIGHEST REPORTING LEVEL
				<---------- ROLES/PERMISSIONS ---------->				
Visitor	Y	N	N	N	N	N	N	N/A
Teacher	Y	Y	Y*	N	N	N	Y	Self
Assistant Principal/Principal	Y	Y	Y*	N	N	N	Y	Own School
Superintendent	Y	Y	Y*	N	N	N	Y	Own District
VB Administrator - Content Editor	Y	Y	Y*	Y	N	N	Y	All Districts
VB Administrator - Quality Assurance	Y	Y	Y*	N	Y	N	Y	All Districts
VB Administrator - Approver/Publisher	Y	Y	Y*	N	N	Y	Y	All Districts
Super User	Y	Y	Y*	Y	Y	Y	Y	All Districts

* Note: May not have been assigned permission to access and view certain videos.

6.8 Stability

ID	Requirement
6.8.1	The system should be designed such that time-out events and other unexpected system errors are non-occurring or minimally occurring events. If and when these system events occur then the system should record and report it to the IT Development & Support team.

6.9 Minimum User System Capabilities

ID	Requirement
6.9.1	The system should be designed such that it includes the best practices recommendations of a User Centric Design Team to ensure consistency, ease of navigation and intuitiveness.

© 2012 Arizona Department of Education

7 Glossary of Terms

Definitions of terms, acronyms, and abbreviations used in this document:

Terms	Acronyms	Definitions
Arizona's Instrument to Measure Standards	AIMS	Arizona's Instrument to Measure Standards is a standardized test administered by the state. It is a standards based assessment aligned to the Arizona Academic Content Standards.
Arizona Local Education Agency Tracker	ALEAT	Arizona Local Education Agency Tracker houses school improvement plans and school goals associated with the improvement plans – need to verify data elements needed and ensure we can get the data into RDSS
Administrator		An Administrator is broadly defined as any user with either a role and/or permission assigned that enables them to administer a component of RDSS by management of its content
Administrator Roles		A User may have one or more administrator roles assigned to them. Their permissions should be the sum total of the roles to which they are assigned when they login to the system. They should also have access to reports relating to any related area.
Analytic User	AU	User who provides psychometric results on data. Also uses statistical analysis on raw data and other data.
Arizona Department of Education	ADE	Arizona Department of Education
Assessment		A teacher assessment which is linked to a video may be in the form of an optional pretest and/or required posttest.
Assessment System		An educator assessment system.
Assistant Superintendent	AS	An Assistant Superintendent person who assists the Superintendent in the execution of their duties.
BASIS		Education Research organization
Course Catalogue		Listing of courses offered
Course Mapping	CM	Ability to take desperate course catalogue and map them for course equivalency
Dashboard		Provides at-a-glance views of data. Has the ability to drill down to refine data presented.
Data Element		An element of data in a report or dashboard that comes from another source.
Descriptor		A block of descriptive text that is always visible to the user when viewing the Observation Entry screens of the ODCT application. It is associated to each scoring value (0-4 for Administrator | Principal) for elements in the rubrics.
District Office Personnel	DO	Director of Professional Development HR Director Superintendent Assistant Superintendent Delegate
Documentation Event		Applies only to the ODCT Principal Tool and is an evaluation occurrence where the principal's evaluator observes and gathers information that is part of the element scoring criteria. There are 8 types of Documentation events out of a total of 15 events.
Education Administrator	EA	An Administrator Role who resolves errors submitted by the Education Professional. This user is typically a Principal, MCESA staff, District Office Staff, Superintendent, etc.

© 2012 Arizona Department of Education

Terms	Acronyms	Definitions
Educator Goal Plan	EGP	
Education Professional	EP	An Education Professional is broadly defined as a user who needs to verify information. It could be anyone who receives a REIL Score such as a Teacher, Principal, Master Educator
English Language Learner	ELL	Student demographic indicator
Enterprise Resource Planning	ERP	Enterprise level financial software for a company or district. Teacher pay and attendance is recorded here.
ESP Solutions Group	ESP	ADE Vendor being utilized to perform the course mapping.
Evaluatees		Specific to this BRD, persons who are being observed and evaluated with any of the REIL Observation Instruments. Evaluators can be both an Evaluator and an Evaluatee (This is the higher order definition for this term)
Evaluators		Persons who will use the Observation Data Capture Tool Suite to record Observation scores of the Evaluatees they have been assigned to observe and score. Evaluators can be both an Evaluator and an Evaluatee
Family Educational Rights and Privacy Act	FERPA	Federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education (20 U.S.C. § 1232g; 34 CFR Part 99 www.ed.gov).
Human Resources	HR	
Instructional Time		The amount of time a teacher instructs a student in a course.
Inter-Rater Reliability		Checking consistency among raters; all raters should be rating at statistically the same level
Intra-Rater Reliability		Checking the consistency of the ratings each rater gives. This ensures that a rater is consistent in their rating.
Local Education Agency	LEA	Typically a School District or a Charter School
Leading Observation Instrument		Composed of 5 rubrics, this document is the basis for the principal evaluation and scoring. The Acronym LOI can be used here as well.
Learning Observation Instrument	LOI	Composed of 6 rubrics, this document is the basis for the teacher evaluation and scoring.
Master Educator	ME	A teacher identified and employed by the district, who instructs other educators the best practices of instruction. One of the REIL Career Pathways. This is a REIL District teacher who takes on additional responsibilities (usually serving as an Instructional Coach or as a mentor to other teachers)
Maximum Scoring Value		The highest scoring value achieved.
Maricopa County Education Service Agency	MCESA	Maricopa County Educational Service Agency. MCESA provides education services and support to assist Maricopa County schools and school districts in meeting strategic goals for student achievement. Dr. Don Covey, Maricopa County Superintendent of Schools, leads the agency.
MCESA Employee	MCE	A person employed by the Maricopa County Educational Service Agency.
Mean Value		The mathematical average that is the calculated result of the sum of all scores divided by the count of scores, e.g. (4+2+3+1+4) / 5 = 2.8
Minimum Scoring Value		The lowest scoring value achieved.
Mode Value		The value that occurs most frequently in a data set.
Observation Cycle		A completed evaluation period. An Administrative/Principal Observation Cycle is not broken down into sessions, as is the Teacher Observation Cycle. The Principal Observation Cycle encompasses an entire school year.

© 2012 Arizona Department of Education

Terms	Acronyms	Definitions
Observation Setting Event		Applies only to the ODCT Principal Tool and is an evaluation occurrence where the principal's evaluator observes and gathers information that is part of the element scoring criteria. There are 7 event types of Observation Settings out of a total of 15 events.
Observation Super User	OSA	A new REIL role being added in ODCT R2v1 that falls into the new 'super user' class of functional role. Only one Observation Super User may be designated a Primary within each District. All others are Secondary (see *OSA* in this Glossary).
Observation Data Capture Tool Suite	ODCT	The suite of tools that enable the entry of Observation scores for Evaluatees.
Principal Observation Data Capture Tool	PODCT	The suite of tools that enable the entry of Observation scores for Principals.
Coach Observation Data Capture Tool	CODCT	The suite of tools that enable the entry of Observation scores for Coach
Teacher Observation Data Capture Tool	TODCT	The suite of tools that enable the entry of Observation scores for Teachers
Personnel Action Request	PAR	Payment transaction related to paying a performance incentive.
Peer Evaluator	PE	A MCESA employee whose primary responsibility is to perform classroom observations of teachers in REIL districts
Performance level		Correlated to element scoring numbers within each of the rubrics (values of 0-4 for Administrators / Principals and 0 to 5 for teachers).
Principal/Assistant Principal	P	A Principal is an educator who has executive authority for a school. They may be assisted in the execution of their duties by an Assistant Principal.
Private		Secure content only available to anyone that has logged into the site and, to which, they have been granted access.
Psychometrician		Analytic user responsible for performing analysis of student test items and student test forms.
Public		Public content is available to anyone who visits the site but has not logged in.
Rewarding Excellence in Instruction and Leadership	REIL	An initiative of the Maricopa County Education Service Agency, engages six Maricopa County school districts in implementing systemic change aimed at transforming how schools recruit, retain, support, and compensate effective teachers and principals. The ultimate goal is building the capacity of educators, targeted professional learning, tools for measuring student success, establishment of multiple career pathways, and sustainable, differential, performance-based compensation are critical elements of REIL. The five year initiative, which will culminate in 2014-2015, is funded by a $51.5 million Teacher Incentive Fund Grant from the US Department of Education.
REILize Decision Support System	RDSS	A cohesive, integrated system designed to enable users to access and analyze information to support problem-solving and decision making • Gathers and links disparate sources of data • Generates reports and allows for analysis • Provides user-specific information (e.g., teacher view, principal view)
REIL Field Specialist	FS	A MCESA employee whose primary responsibility is the implementation of the REIL Grant Design in the REIL Districts. A person that is responsible for the supervision of Peer Evaluators who is also a subject matter expert.
REIL Score		The score that determines the performance-based compensation for teachers

© 2012 Arizona Department of Education

Terms	Acronyms	Definitions
		and principals, derived from scores on the teacher and principal evaluation instrument (classroom observations, documentation, professional responsibilities), individual, team, and school value-added calculations.
Rubrics		A rubric is a scoring tool used to assess educators (e.g. Teachers, principals).
Scalability		Scalability is the ability of a system, network, or process to handle an increasing amount of work in a capable manner, or its ability to be enlarged to accommodate growth. A system whose performance improves proportionally to the hardware capacity added is said to be a scalable system.
School Codes for the Exchange of Data	SCED	National Standardized course codes and descriptions to be able to exchange data about courses across the country.
Standard Report		Any other report that is not a dashboard or graphical style of report.
Observation Score		Numeric value applied to rubric elements and events by evaluators after observing evaluatees in their associated environments where job performance typically occurs.
Observation Cycle Session		One of three components of a teacher Observation Cycle. The 3 components are: Pre conference, Observation, and Post-Conference.
Student Test Score		Numeric value resulting from the administration of a student assessment
Value Added Score		Numeric value resulting from the application of a mathematical model designed to measure instructional effectiveness
Special Education	SPED	Student demographic indicator
Student Accountability Information System	SAIS	Reporting system capturing student enrollment numbers from the districts to the state in order to receive funding.
Student Information System	SIS	District system that captures student attendance information.
Student Teacher Link	STL	The concept capturing the relationship between Students, Courses, and Teachers
Superintendent	S	A person who directs and manages a school district. They may be assisted by an Assistant Superintendent in the execution of these duties.
Super User		A class of functional role with an associated REIL role that has special permissions and screen visibility associated to login identification processes. The super user class has multiple types to accommodate the unique business rules and functional requirements of each type. Each type of super user will have a unique name to identify it. Super user types are required in the ODCT Suite to mitigate special circumstances in business process (a.k.a. Super User or sysadmin). The responsibilities typically include setup and configuring, establishing and managing user accounts, etc. They should have full visibility to anyone in the system including reports.
Teacher		Educators instructing students in the schools within each district. Teachers are the Evaluatees of the Learning Observation Instrument.
Teams		Teachers grouped together for the purpose of group level Value Added scores.
User Management	UM	The authentication feature that provides administrators with the ability to identify and control the state of users logged into a system or network. This includes, but is not limited to, granting access privileges, the ability to query and filter users that are currently logged into the system, manually log out users, and control user login counts and login times.
Value		Number representing the performance level of a particular element in an Observation Cycle Session
Value-Added	VA	Numeric value resulting from the application of a mathematical model

© 2012 Arizona Department of Education

Terms	Acronyms	Definitions
		designed to measure instructional effectiveness
Verification Tool	VT	A tool allowing the user to verify information associated to the REIL score
Verify		An affirmative action taken to indicate agreement with information displayed
Vertical Scalability		Vertical scalability is the ability to increase the capacity of existing hardware or software by adding resources, such as adding processing power to a server to make it faster. Also see *Scalability* in this Glossary.
Video Bank	VB	A component of the RDSS housing videos
View		A passive action of looking at information
Visitor		Any person who is visiting the RDSS site and has not logged in.
Data Management and Administration/Reporting	DMAR	A module is that it will provide School Districts with the tools and "best practices" systems by which they can view Administrative and Reporting information to effectively manage MCESA REIL program objectives.

© 2012 Arizona Department of Education

APPENDIX A. Supporting Documentation

A1. Dashboards

The following dashboard details are merely samples and have not been fully defined.

Dashboard Name	Section Name	Additional Details	User(s)
REIL Profile			
	Common User Information	• User Name • Educator ID • Current Assignment • Current Location	T, P, AP, S, DO, MCE, FS, PE, ME, AU, HR
	User Demographics	• Current Linked Students (link to roster) • Current Team Members (link to roster) • Current Certification Status • HQ Status • Career Pathway Designation • Current Supervisor • Current Evaluator • Current STEP Results (link to results)	T
		• Current Teacher Roster • School Teams • All School student demographics • All school student assessment data	P
		• Student demographics (aggregate) • School assessment data (aggregate)	AP

	REIL Profile	• REIL Score
		  ○ Current REIL Score
		  ▪ Current Observation Score (link to details)
		  ▪ Current Student Growth Score (link to details)
		  ○ Historical REIL Score Data
		  ▪ Previous Observation Score(s)
		  ▪ Previous Student Growth Score(s)
		• Value Added Calculations (link to details)
		• Learning Observation Instrument Rubric Ratings (link to details)
			T,P

		• REIL Score Components & Percentages Table
		  ○ Evaluation Instrument - 50% of score (link to details)
		  ○ Individual Value-Added – 40% of score (link to details)
		  ○ Team Value Added – 5% of score (link to details)
		  ○ School Value Added – 5% of score (link to details)
		• Teacher Performance Award Continuum Table
		  ○ Level of Effectiveness (link to details)
		  ▪ Ineffective
		  ▪ Effective
		  ▪ Highly Effective
		  ○ Award Amount
		  ▪ $3000
		  ▪ $4000
		  ▪ $5000
		• REIL Score Range – Range to be determined
			T

		• REIL Score Components & Percentages Table (link to details)
		• Principal Performance Award Continuum Table
		  ○ Level of Effectiveness (link to details)
		  ▪ Ineffective
		  ▪ Effective
		  ▪ Highly Effective
		  ○ Award Amount
		• REIL Score Range – Range to be determined
			P

		• Teacher REIL Score by Rubric	P

©

		• District Progress Chart	S
	Performance Based Compensation	• Current REIL Score (link to details) • REIL Score History (link) • REIL Guidebook (link to PDF) • Performance Pay History (link) • Current Award (link) • Performance Based Compensation Tracker (link) • Performance Based Compensation History (link) *NOTE: The Performance Based Compensation Tracker is a tool for teachers similar to monitoring student progress toward AIMS on benchmarks. Teachers can monitor if they are on track to receiving performance based compensation. This would be updated four times between August and March.*	T,P
	Learning Observation Instrument Profile	• Ratings by Year (link to each year available) • Growth Over Time (graph)	

	Student Survey Results	• User Details
		  ○ User Name
		  ○ Educator ID
		• Current Student Survey Results (link)
		• Past Student Survey Results (link)	

Data Verification			

	Verification for Teachers	• Items to Approve or Dispute
		  ○ Current Assignment & Location
		  ○ Current Linked Students (link to roster)
		  ○ Current Team Members (link to roster)
		  ○ Pending Performance Award (link to summary)
		  ○ Career Pathway Designation
		  ○ Learning Observation Instrument Ratings (link to summary)
		  ○ Supervisor
		  ○ Evaluator
			T

	Pending Performance Award	• Items to Approve or Dispute
		  ○ REIL Score
		  ○ Placement on Continuum
		  ○ Performance Award (Dollar Amount)
		  ○ Payout Date
		• If Dispute is selected, one of the following reasons must be selected
		  ○ Incorrect REIL Score
		  ○ Incorrect Placement on Continuum
			T

	Learning Observation Instrument Ratings	• Approve or Dispute by content rubric which illustrates the rating received (ratings listed below)
		  ○ Exemplary
		  ○ Proficient
		  ○ Approaching
		  ○ Developing
		  ○ Unsatisfactory	

Professional Learning Resources			

	Video Bank	• Link to Video Bank Module
		• View Video(s)
		• Search Videos
		  ○ By Content Rubric
		  ○ By Content Area
		  ○ By Grade Level
			P,S

	Teacher Resource Center	This view includes the following Links: • Professional Development Center • Video Bank • Supporting Documents • Educator Goal Plans • Learning Observation Instrument • Assessment System • Grade Book • Student Attendance Tracker	T

©

		• Curriculum
		  ○ Pacing Guides
		  ○ Arizona Content Standards
		  ○ Common Core Standards
		  ○ InTasc Teaching Standards	

	Professional Development	• Enrollment
		  ○ Registration
		  ○ Track PD by Participant
		  ○ Track PD by Provider
		• Online Learning
		  ○ Online Training Modules
		  ○ Online Assessment of PD Training
		• In Person Trainings
		  ○ Training / Workshop Information
		  ○ Registration
			T,P,S

		• Master Educators and the Teachers assigned to them
		• Number of Teachers who met their Educator Goal Plan
		• Status of Educator Goal Plans of Support
		  ○ Complete
		  ○ Incomplete
		• Teachers by Educator Goal Plan
		  ○ Rubric
		  ○ Current Year
		  ○ Multiple Years
		• Teachers not Receiving Educator Goal Plan Support
		  ○ Ability to view by number of days
		• Teachers aligned with:
		  ○ Master Educators
		  ○ Administrators
		• Teacher Support provided to date for their Educator Goal Plan
		• Teacher Professional Development Participation
		  ○ Who has participated
		  ○ Who has not participated
		  ○ Aggregated by
		  ▪ Group
		  ▪ Teams
		  ▪ Grades
		• Compare Professional Development modules aligned to specific elements to:
		  ○ Resulting Teacher performance
		  ○ Student achievement performance
		• Teachers on Improvement Plans
		• Teacher list categorized by the four performance levels on the REIL Score continuum
			P

		• Student Statistics
		  ○ Percentage by Course
		  ○ Percentage by Programs
		• Educator Goal Plan
		  ○ School Comparison for Completeness
		  ○ Scheduled Visits between Coach and Teacher
		  ○ Number of times plan is visited
		  ○ Correlation between number of visits and Teacher performance
		  ○ Number of Teachers that met their Educator Goal Plan
		  ▪ School
		  ▪ District
		  ○ Completed Educator Goal Plans
		  ▪ School
		  ▪ District
		  ○ Incomplete Educator Goal Plans
		  ▪ School
		  ▪ District
		  ○ Teachers by Educator Goal Plan
			S

©

		▪ Goal ▪ Rubric ▪ Element ▪ Single or multiple years ○ Principals who have not received any support on Educator Goal Plan ▪ Ability to view by number of days ○ Principals assigned to an Evaluator for their Educator Goal Plan ○ Principal Support provided to date for their Educator Goal Plan • Course Failure Rates ○ School ○ Course • Performance Details ○ Considerably outperformed district wide ▪ Teachers • Include Teacher Name • View by: ○ Grade ○ Content ○ Achievement ○ Observation Score ▪ Principals • Include Principal Name • Content • Achievement • Observation Score • Instructional Coach listing and Teachers assigned to them • Professional Development Plan by School • Professional Development Participation ○ Who has participated ○ Who has not participated ○ Aggregated by ▪ Group ▪ Teams ▪ Grades • Compare Professional Development modules aligned to specific elements to: ○ Resulting Principal performance ○ Student achievement performance • Principal and aggregate Teacher performance over time ○ School ○ Grade ○ Subject • Principals on Improvement Plans • Principal and Teacher lists categorized by the four performance levels on the REIL Score continuum	
	Career Pathway System	List REIL Districts • List Career Pathways within District ○ Instructional Coaches ○ Reading Specialists ○ Mentor Teachers	T,P,S
	Interstate School Leaders Licensure Consortium Standards		P,S
Observation			
	REIL Teacher Evaluation	• Observations ○ Current Year ○ Previous Year(s) • Learning Observations Instrument • Student Growth Measures (Value Added) • Educator Goal Plan	T

©

		• Verification System
		  ○ Classroom Roster (Student-Teacher Link)
		  ○ REIL Score
		  ○ Performance Based Reward
		  ○ Career Pathway System	

		• Observation Capture Tool
		• Teacher Observation Results
		• Teacher Student Growth Results
		• Teacher Verification
		  ○ Team Assignments
		  ○ Teacher Roster and Time Allocation
		  ○ REIL Score and Rewards
		• List of Evaluators
		  ○ Teachers assigned
		  ○ Schedule of Observations
		• Incomplete Teacher Evaluations Status Report
		  ○ Teacher
		  ○ Evaluator Assigned
		• Inter-rater and Intra-rater reliability scores
		  ○ Current Score
		  ○ Score over time
			P

	REIL Principal Evaluation	• Observations
		  ○ Current Year
		  ○ Previous Year(s)
		• Learning Observations Instrument
		• Student Growth Measures (Value Added)
		• Educator Goal Plan
		• Verification System
		  ○ My Principal REIL Score and Reward
			P

	REIL Evaluation System	• Observation Results
		  ○ Current Year
		  ○ Previous Year(s)
		• Learning Observation Instrument
		• Leading Observation Instrument
		• Master Educator Observation Instrument
		• Student Growth Measures (Value Added)
		• Verification System
		  ○ Principal Assignments
		  ○ Evaluator Assignments
		• Inter-rater and Intra-rater reliability scores
		  ○ Current Score
		  ○ Score over time
			S

	Observation Data	• Learning Observation Instrument Scores • Leading Observation Instrument Scores • Master Educator Observation Instrument Scores	S, P

	Superintendent View	• Percentage of evaluations completed by Principal
		  ○ Teacher evaluations
		  ○ Principal evaluations
		• Number of evaluations remaining by Principal
		  ○ Teacher evaluations
		  ○ Principal evaluations
		• List of evaluations assigned to me
		  ○ Completed evaluations
		  ○ Incomplete evaluations
		• List of Evaluators and the Principals assigned to them
		• Incomplete Teacher Evaluations
		  ○ Teacher
		• Evaluator Assigned
			S

	Principal View	• Percentage of evaluations completed by Assistant Principal ○ Teacher evaluations • Number of evaluations remaining by Assistant Principal	P

©

		○ Teacher evaluations • List of evaluations assigned to me ○ Completed evaluations ○ Incomplete evaluations • List of Evaluators and the Assistant Principal assigned to them • Incomplete Teacher Evaluations ○ Teacher ○ Evaluator Assigned	
Student Data			
	AIMS	• MCESA Unified School District Results • REIL Elementary School Results • My Classroom Results • Individual Student Results • ADE AIMS site	T,P,S
	District Benchmark Assessments		T,P,S
	REIL Custom Assessments		T,P,S
	Arizona Content Standards	Language Arts Mathematics	P,S
	Common Core Standards		P,S
Performance			
	School Performance	• School Performance • Grade Performance • Teacher Performance • Team Performance	P, T
	District Performance	• School Performance (District Level) • Grade Performance (District Level) • Teacher Performance (District Level) • Team Performance (District Level)	S
	Student Assessments		
	Principal View	• Teacher Performance over time • Compare School Performance ○ School versus District ○ School to REIL Districts ○ School by School • Students with two or more consecutive Ineffective Teachers • Aggregated School Data ○ Attendance ○ Discipline Incidences ○ Out of School Suspension ○ Student Conduct ○ REIL Scores • Validate Grades by Comparison of: ○ Student class grade ○ Student achievement performance • Correlations between Teacher Performance and: ○ Student Discipline ○ Attendance ○ Out of School Suspensions • Correlations between Teacher Attendance and Student Achievement	P
	Superintendent View	• Compare School Performance ○ School versus District ○ School to REIL Districts • Aggregated School Data ○ Attendance ○ Discipline Incidences ○ Out of School Suspension	S

©

		○ Student Conduct • Compare Benchmark Results to Overall AIMS Performance ○ School ○ District • Correlations between Principal Performance and: ○ Student Discipline ○ Attendance ○ Out of School Suspensions • Correlations between School Attendance and Student Achievement	
Human Resources			
		• Complete or Incomplete Certified Evaluator Training • Other REIL Training who met the score requirements • Number of Highly Effective Teachers ○ Group by School ○ View by: ▪ Subject ▪ Grade • Improvement Plans ○ Group by School ○ Data included ▪ Teacher Name ▪ Evaluator Name ▪ Timelines to meet statutory requirements ▪ REIL Score • Inter-rater and Intra-rater reliability ○ Schools ○ Evaluators • Variance between student achievement and Observations scores of Teachers at the school level • List of those who have not received incentive rewards ○ Teachers ○ Administrators • Teacher Retention Data ○ General information ○ Relationship to effectiveness (REIL Score) ○ Professional Development Attendance ○ Induction ○ Teaching Assignments ○ View Current and Over Time	HR
Finance Information			
		• Incentive Rewards Over Time • Percentage of budget allocated to PBC • Generate reports for ADE Performance Pay (CSF Narrative?) • Salary Schedules • Financial Modeling Tool	TBD
MCESA Information			
	Data Analytics	• Obtain data in spreadsheet for data mining purposes ○ Aggregated data ○ Disaggregated data ○ Raw data • Ability to create custom reports	AU
	MCESA Information	• GRPA Measures • Performance Measures • Program evaluation information	MCE
	Field Specialist View	• List of Peer Evaluators ○ Teachers associated to Peer Evaluator ○ Number of completed evaluations for Peer Evaluator • Educator Goal Plan ○ Plan for each Teacher assigned to Peer Evaluator	FS

©

		• Professional Development for:
		  ○ Field Specialists
		  ○ Peer Evaluators
		• View correlation of LOI elements to attendance at Professional Development Sessions
		• View data grouped by Field Specialist and by Peer Evaluator to compare effectiveness of:
		  ○ Principals
		  ○ Teachers
		  ○ Assistant Principals
		• View the number of Effective Teachers, Principals, and Assistant Principals by:
		  ○ District
		  ○ School
		• View data the Superintendent can see for the Peer Evaluator	

	Peer Evaluator View	• View data grouped by Peer Evaluator to compare effectiveness of:
		  ○ Principals
		  ○ Teachers
		  ○ Assistant Principals
		• View data the Assistant Principal can see for a group of Assigned Teachers
		  ○ Possible exception of Master Educator performance
		• View the Professional Development that is provided by Master Educator
			PE

	Program Director	• Professional Development for Field Specialist
		• View correlation of LOI elements to attendance at Professional Development Sessions
		• View data grouped by Field Specialist and by Peer Evaluator to compare effectiveness of:
		  ○ Principals
		  ○ Teachers
		  ○ Assistant Principals
		• View the number of Effective Teachers, Principals, and Assistant Principals by:
		  ○ District
		  ○ School
		• View data the Superintendent can see for the Peer Evaluator
		• View TIF/APR Performance Measure report
		• View statistics on the LOI elements. Compare by:
		  ○ District
		  ○ Rubric
		  ○ Element
		• View comparison of REIL districts to a group of schools identified in the REIL grant
		• View the career path for the Career Pathway Teachers over time
		• View list of who is on each Career Pathway by:
		  ○ District
		  ○ Pathway
		• View data for turnaround schools
			PD

REIL Information			
	About REIL	• REIL Teachers • REIL Peer Evaluators • REIL Principals • REIL Superintendents • REIL Central Office • FAQ's	
Reports			
	Login Statistics	• User login statistics for REIL Decision Support System	S
	Scores	• Aggregated Teacher Scores for each rubric element	S

©

		○ School ○ District	
	Scores over time	• Aggregated Teacher Scores for each rubric element ○ School ○ District	S
	Observations/Value Add Data Correlations	• Correlation between Principal Observations and Value Added Scores	S, P
		• Correlation between Observation Score, Student Assessments by School	S, P
	?	• Principals assigned to each Primary and Secondary Evaluator	S
	Refinements & Recommendations	• Refinements and Recommendations by Teacher ○ Observations ○ Educator Goal Plan	S, P

User Key			
Teacher	T	Peer Evaluator	PE
Principal	P	REIL Field Specialist	FS
Assistant Principal	AP	Master Educator	ME
Superintendent	S	Analytic User	AU
District Office	DO	Human Resources	HR
MCESA Employee	MCE	Program Director	PD

A2. Dashboard User Permissions

This matrix is based on the table in "A1. Dashboards" above, all permissions have not yet been fully defined therefore this table may not be complete at this time.

	Teacher	Principal	Assistant Principal	Superintendent	Assistant Superintendent	District Office	MCESA Employee	REIL Field Specialist	Peer Evaluator	Master Educator	Human Resources	Analytic User	Program Director	Visitor
REIL Profile														
Common User Information	X	X	X	X	X	X	X	X	X	X	X			
User Demographics	X	X	X	X	X	X	X	X	X	X	X			
REIL Profile	X	X	X	X	X	X			X	X	X			
Compensation	X	X	X	X	X	X			X	X	X			
Learning/Leading Observation Instrument Profile	X	X	X	X	X	X	X	X	X	X	X			
Student Survey Results														
Observation Details	X	X	X	X					X	X				
Value-Added Details	X	X	X	X					X	X				
Data Verification														
Verification	X	X	X	X	X	X			X	X	X			
Pending Performance Award	X	X	X	X	X	X			X	X	X			
Learning Observation Instrument Ratings	X	X	X	X	X	X			X	X	X			
Professional Learning Resources														
Video Bank	X	X	X	X	X			X	X	X				

©

Teacher Resource Center	X								X	X				
Professional Development	X	X	X	X	X				X	X				
Career Pathway System	X	X	X	X	X				X	X				
Interstate School Leaders Licensure Consortium Standards		X	X	X	X									
Observations														
REIL Teacher Evaluation	X	X	X											
REIL Principal Evaluation		X	X	X	X									
REIL Evaluation System				X	X									
Observation Data		X	X	X	X									
Superintendent View				X	X									
Student Data														
AIMS	X	X	X	X	X									
District Benchmark Assessments	X	X	X	X	X									
REIL Custom Assessments	X	X	X	X	X									
Arizona Content Standards		X	X	X	X									
Common Core Standards		X	X	X	X									
Performance														
School Performance		X	X											
District Performance				X	X									
Student Assessments														
Principal View		X	X											
Superintendent View				X	X									
Human Resources														
Human Resources View											X			
Finance Information														
Finance Information											TBD			
MCESA Information														
Data Analytics												X		
MCESA Information							X							
Field Specialist View								X						
Peer Evaluator View									X					
Program Director													X	
REIL Information														
About REIL	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Public Dashboards	X	X	X	X	X	X	X	X	X	X	X	X	X	X

A3. Data Requirements

These are the data requirements that were collected during the Business Requirements discovery phase for the DMAR module. Additional data elements have been documented in the following BRD's previously finalized: Educator Goal Plan, Video Bank, and Professional Development. (Please refer to section 1.2 References)

Note: The Student-Teacher-Course Connection project at ADE does not currently have a final list of related fields; therefore the elements listed below may change.

Data Element	Priority	Comments
Teacher Information (HQT)		
HQT ID	C	Teacher ID from ADE

©

Data Element	Priority	Comments
LEA ID	C	
School ID	C	
Teacher Name	C	
Teacher Birthdate	C	
Course Information (Required From Districts)		
ADE Assigned ID for School	C	
ADE Assigned ID for LEA	C	
Local course code	C	
State course code	C	
Section Name	C	
Term, period, and schedule course is taught	C	
Local Course Name	C	
Student Teacher Course Connection Information		
Local Course Name	C	
AZ Standard Course Name	C	
Section ID	C	
Section Name	C	
School Year	C	
Term Code	C	
Teacher ID – Teacher of Record (TOR)	C	
Teacher Last Name	C	
Teacher ID(s) – Other	C	
School ID	C	
Student ID	C	
Entry Date	C	
Exit Date	C	
Grades	C	
Percentage of Instructional Time	C	NOTE: This field is not presently being tracked by ESP CourseWalk
Student Accountability Information System		
Student First Name	C	Available from ADE
Student Middle Name	C	Middle Initial - Available from ADE
Student Last Name	C	Available from ADE
ELL Student	C	0 = No 1 = Yes Information available from ADE:

©

Data Element	Priority	Comments
		• Whether the student is listed as having an ELL need • Whether the student was assessed as not proficient in English (assessments will be moving out of this database…) • Whether the student participated in an ELL program.
SPED Student	C	0 = No 1 = Yes Available from ADE
Student attended the full school year	C	0 = No 1 = Yes
Student receives Free/Reduced Lunch	C	0 = No 1 = Yes Available from SAIS
Student SAIS ID	C	Available from ADE
Student Ethnicity	C	• Available from ADE • Correctness of resulting ethnicity reporting code needs to be verified.
Student Gender	C	• Male • Female • Available from ADE
Migrant Student	C	0 = No 1 = Yes Available from ADE
Homeless Student	C	0 = No 1 = Yes Available from ADE
Student Birthdate	C	Format: MM/DD/YYYY Available from ADE
Foster Care Student	C	0 = No 1 = Yes • Not currently collected
Number of days Student enrolled	C	• These can be derived from SAIS enrollment transactions. • The data warehouse maintains these data as facts for analytic purposes. These may not be appropriate for reporting purposes.
Student attend the same school last year	C	0 = No 1 = Yes • This can be derived from SAIS enrollment transactions. • The data warehouse maintains these data as facts for analytic purposes. These may not be appropriate for reporting purposes.
Record of Student AIMS Score from previous years	C	This data resides at ADE
Student suspension / disciplinary actions	C	
Student was held back	C	0 = No 1 = Yes

©

Data Element	Priority	Comments
Grade student was held back	C	
Number of Days in Attendance	C	• These can be derived from SAIS enrollment transactions. • The data warehouse maintains these data as facts for analytic purposes. These may not be appropriate for reporting purposes.
Human Resources		
Total years of Teaching experience	C	• Teacher • Principal • Assistant Principal
Total years in District	C	• Teacher • Principal • Assistant Principal
Teacher Attendance	C	• Teacher • Principal • Assistant Principal
Hire Date	C	• Teacher • Principal • Assistant Principal
Certifications	C	• Teacher • Principal • Assistant Principal
Date of Birth	C	• Teacher • Principal • Assistant Principal
BASIS		
Formula(s)	C	• Observation Score • Value Added Score • REIL Score
Raw Data for following tests for 2012-2013 School Year	C	• Subject / Grade range • **Elementary** • Elementary Art 3, 8 • Elementary Physical Education 3, 8 • Elementary Music 3 • Foundational Choir Grade agnostic • Foundational Band Grade agnostic • **Secondary** • Two Dimensional Art Grade agnostic • Foundational Choir Grade agnostic • Foundational Band Grade agnostic • Beginning Dance Grade agnostic • Beginning Theater Grade agnostic • Beginning Physical Education Grade agnostic • Reading* 9 – 12 • Math** 9 – 12 • Science*** 9 – 12

©

Data Element	Priority	Comments
		• American History Grade agnostic • American Government Grade agnostic • World History Grade agnostic • Economics Grade agnostic • Arizona Government Grade agnostic

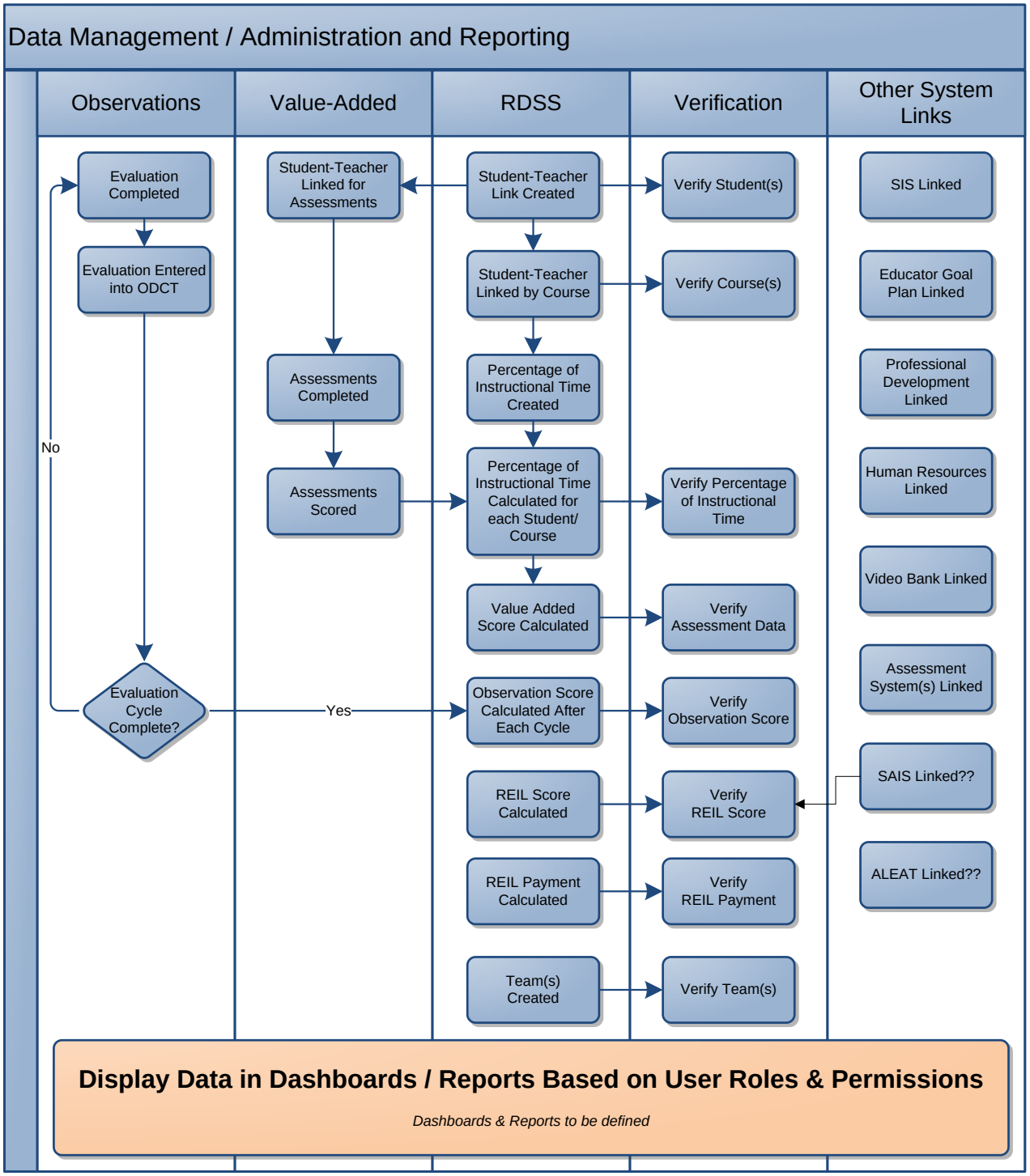
A4. Assigning Evaluators, Evaluatees, Master Educators

MCESA Relationship – Assignment of Peer Evaluator by MCESA Administrator (Obs)		
Actions	Assignment of	Notes
MCESA Admin to setup: 1. Field Specialist 2. Peer Evaluator	District -> School -> Teacher	Field Specialist will not have Teams, however Peer Evaluators will.
District Relationship – Assignment of Evaluators to Evaluatees (Obs)		
District may delegate this setup to the Principal	School -> Teams -> Teachers	The Teacher Evaluators are: • Principal • Assistant Principal • Peer Evaluators
School Relationship – Assignment of Evaluators to Evaluatees (Obs)		
Principal to setup	School -> Teams -> Teachers	The Teacher Evaluators are: • Principal • Assistant Principal NOTE: Al recommends that TEAMS be setup as a group so that new roles can easily be added to the group
Master Educator Relationship – (VA)		
Setup by District Office Employee (Likely Director of PD or Principal/Assistant Principal)	District -> School -> Teacher	No Cross District Master Educators are assigned to the teachers that they are coaching. This is used to calculate their Value Added Score
Career Pathway Assignment		
	District -> Master Educator	There are three types of Master Educators: • ME – 100% in classroom • ME – 100% out of classroom • ME – Hybrid of the above

©

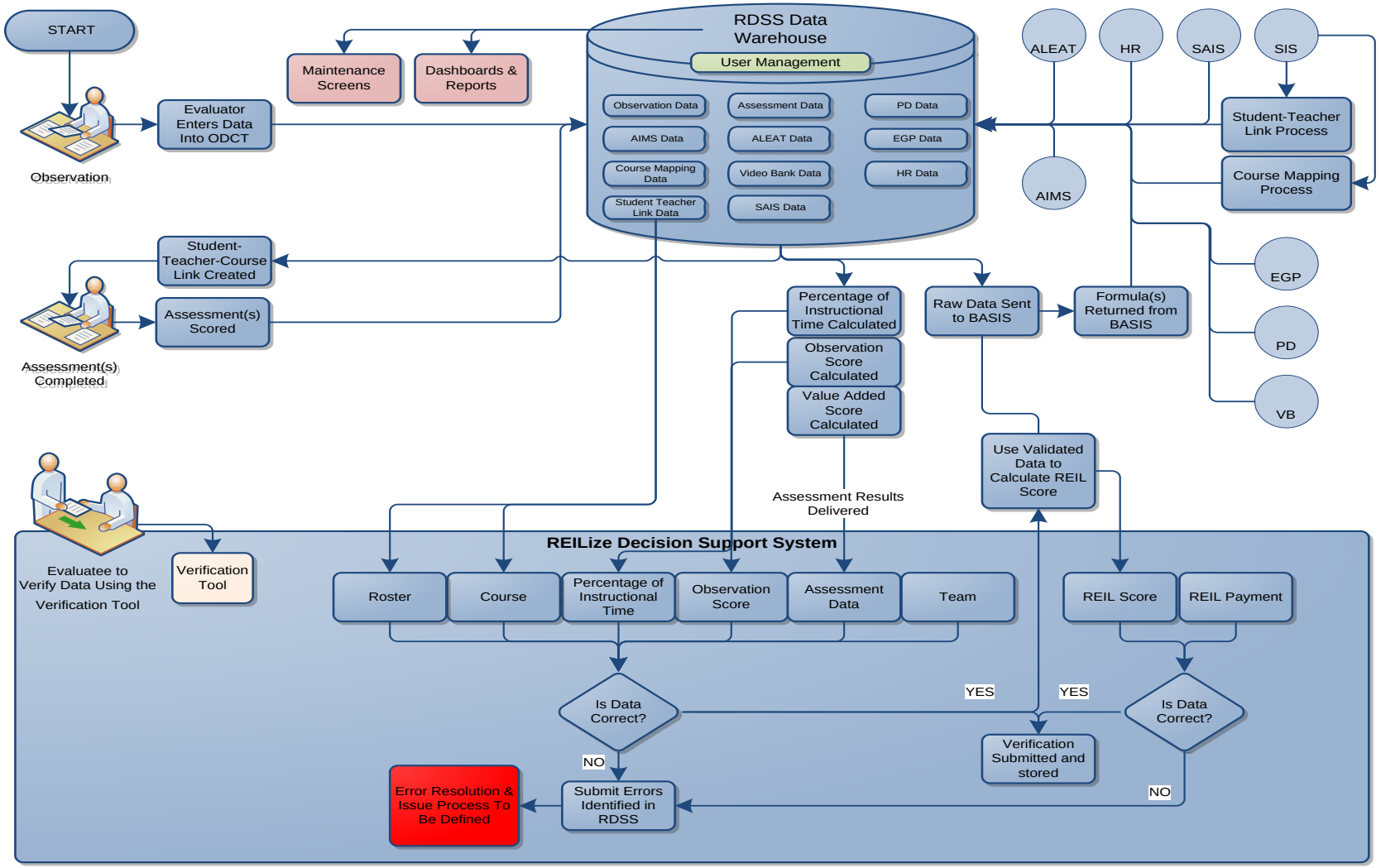
APPENDIX B. Flow Documents

B1. Data Management / Administration and Reporting



©

B2. DMAR / RDSS Relationships

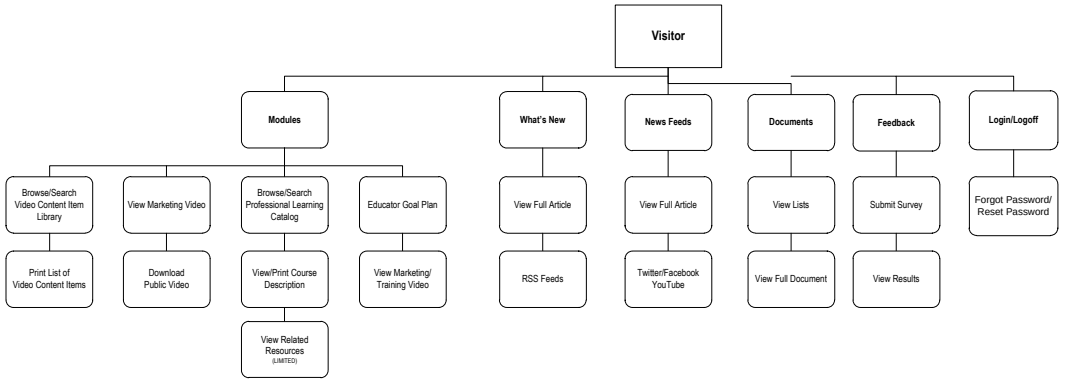


© 2012 Arizona Department of Education

B3. REIL DSS Functional Model

Figure 1 – Visitor

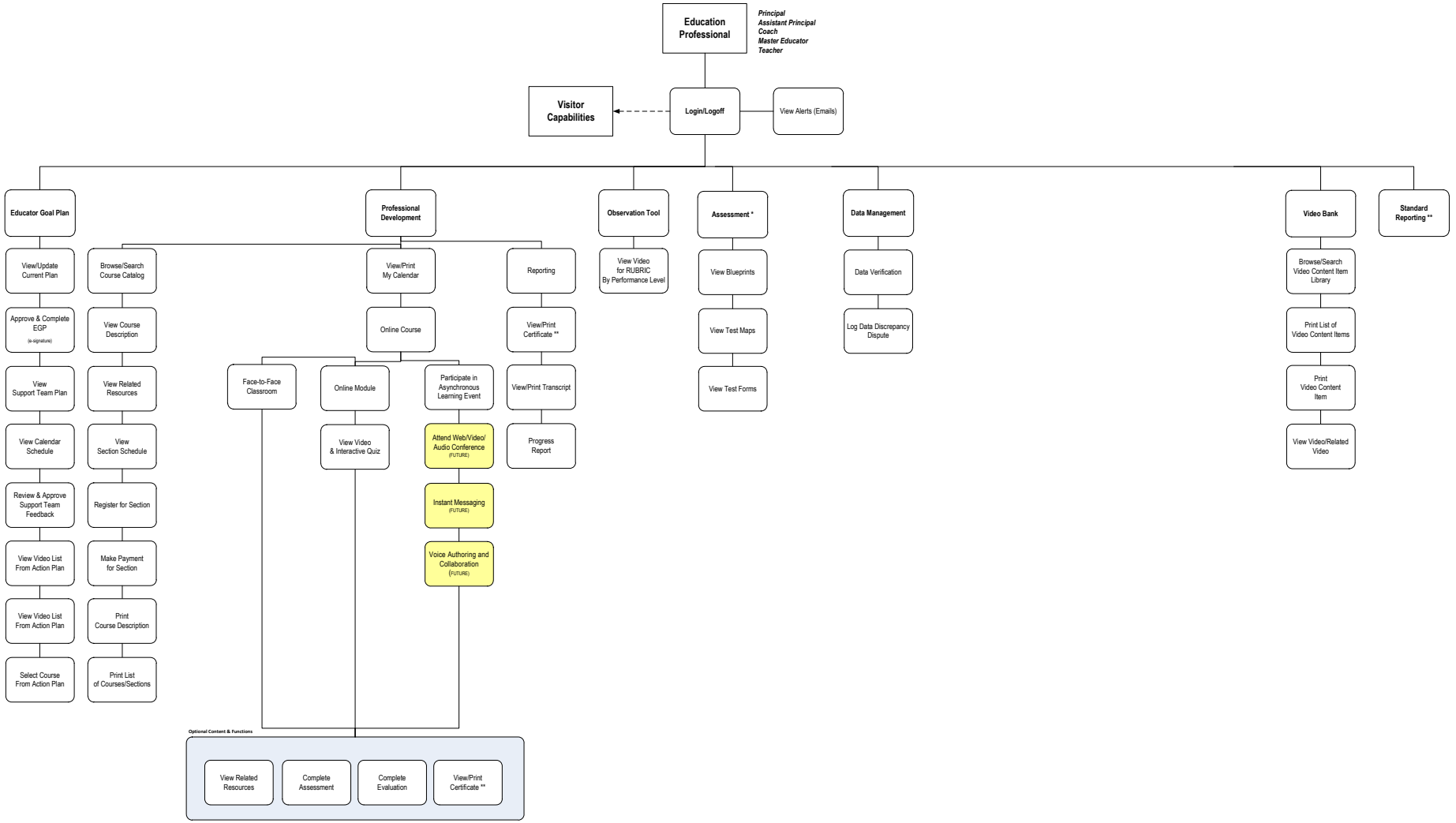
TITLE	REVISED	DRAWN BY	PAGE
REIL System High-Level Functional Model – Visitor	04/18/2012	Rich Schnettler	1 OF 13



© 2012 Arizona Department of Education

Figure 2 - Education Professional

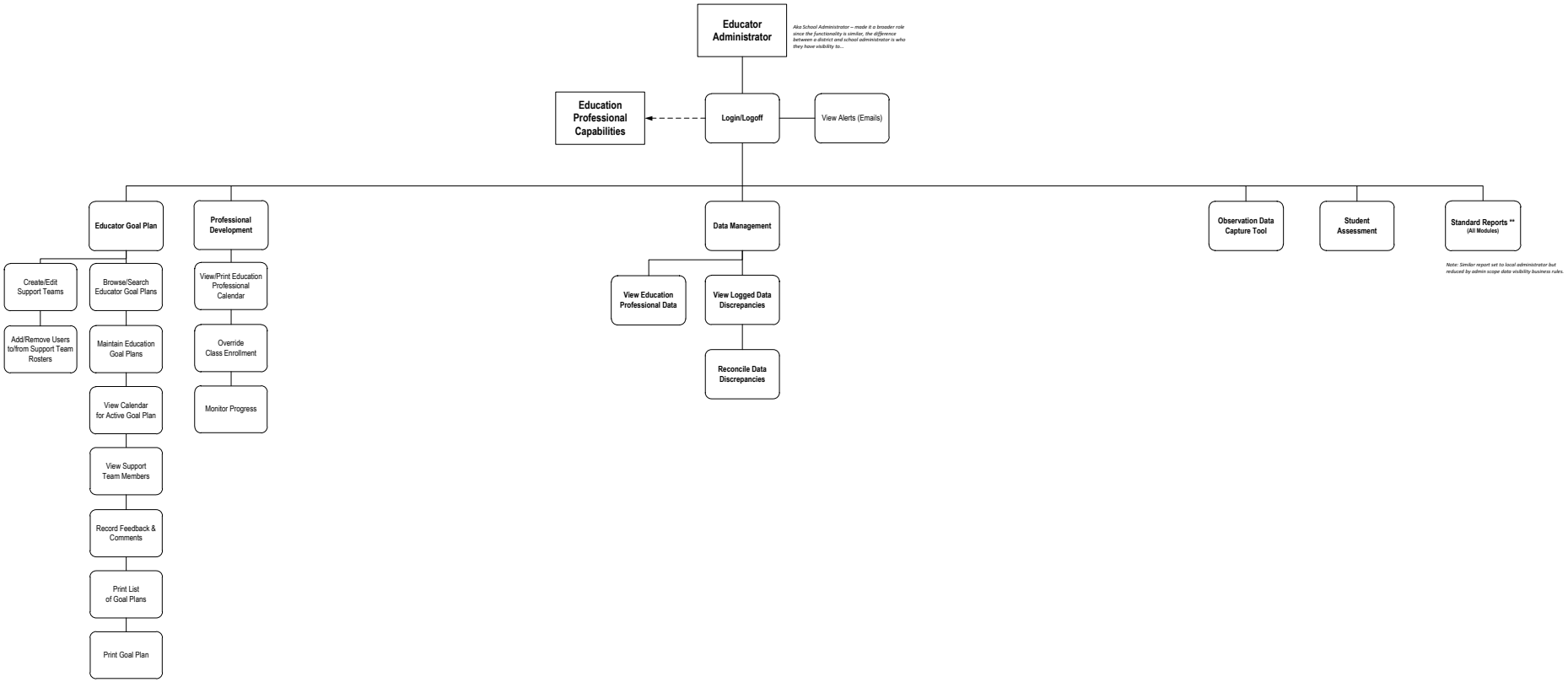
TITLE	REVISED	DRAWN BY	PAGE
REIL System High-Level Functional Model – Education Professional	04/18/2012	Rich Schnettler	1 OF 13



© 2012 Arizona Department of Education

Figure 3 - Education Administrator

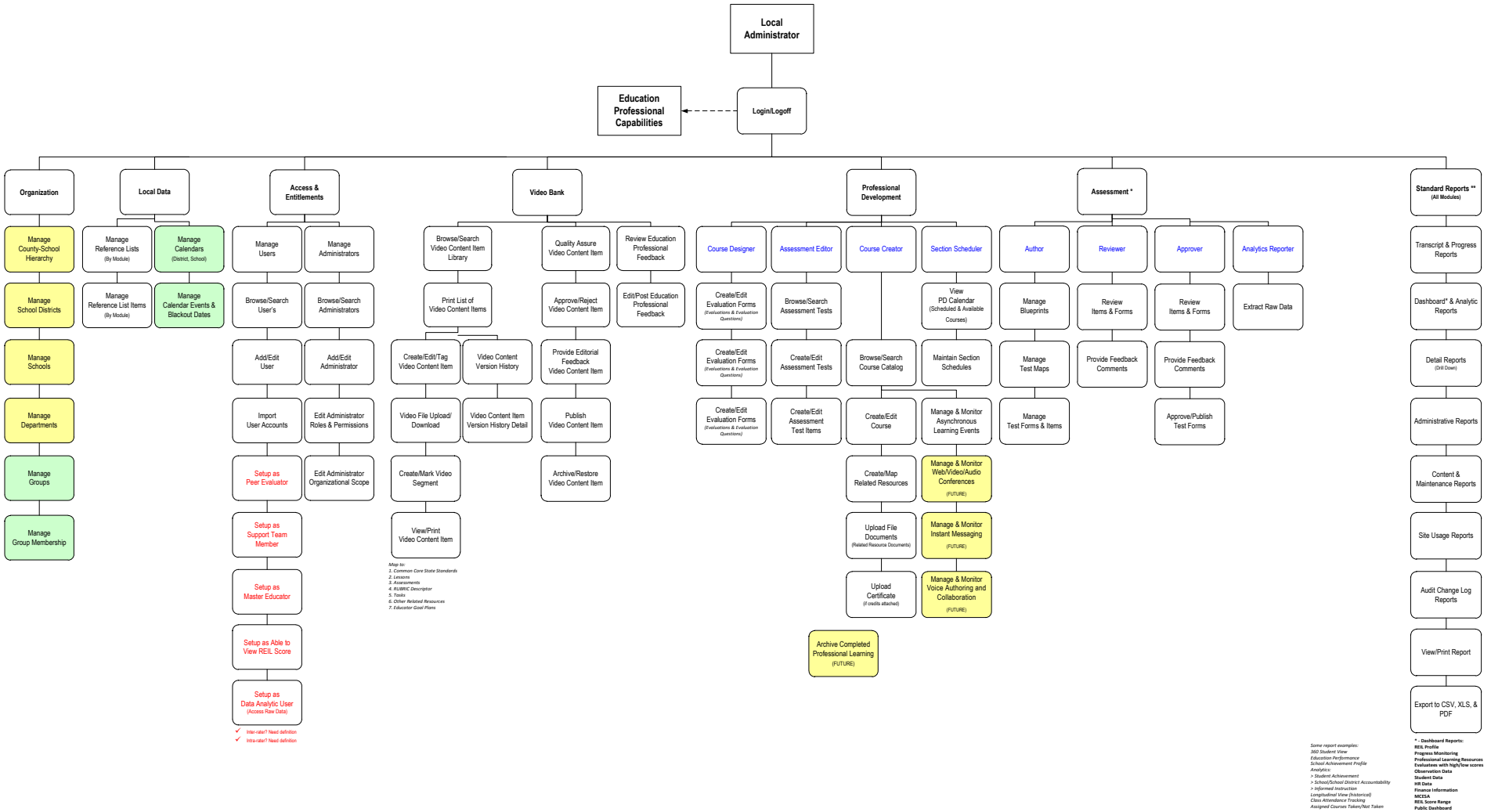
TITLE	REVISED	DRAWN BY	PAGE
MCESA REIL System High-Level Functional Model – Education Administrator	04/18/2012	Rich Schnettler	1 OF 13



© 2012 Arizona Department of Education

Figure 4 – Local Administrator

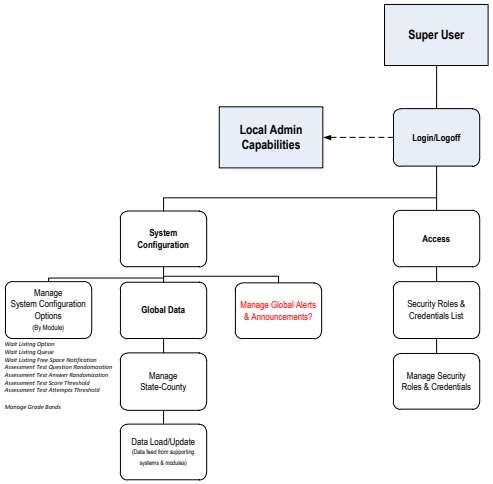
TITLE	REVISED	DRAWN BY	PAGE
MCESA REIL System High-Level Functional Model – Local Administrator	04/18/2012	Rich Schnettler	1 OF 13



© 2012 Arizona Department of Education

Figure 5 - Super User

TITLE	REVISED	DRAWN BY	PAGE
MCESA REIL System High-Level Functional Model – Super User	04/18/2012	Rich Schnettler	1 OF 13



© 2012 Arizona Department of Education